

Modern packaging



Nominated for *Packaging's Hall of Fame*. Story on Page 80

March 1951

• "you name it...I helped make it?"



Glue for disposable dishware

Why nary a drip as I sip? Glue! Moisture-resistant glue. That seals in ice cream sodas, steaming coffee, milk. In cups, containers and straws. Glue that must be non-toxic, colorless, odorless. That provides a high-speed bond that's as strong as the toughest paper; as flexible as the thinnest. Unusual? Not in the least!

• "you name it...I helped make it!" Look around a drug-store. There isn't a single item that doesn't require at least one, and sometimes eight types of glue in its making, labeling, packaging, shipping. The NATIONAL touch is everywhere. Glue applied through imaginative research and service. To every item of daily life.

STARCHES



ADHESIVES

National Starch Products Inc.

Executive Offices: 270 Madison Ave., New York 16, N. Y. • Plants: Dunellen, N. J., Chicago, Indianapolis, San Francisco. • Sales Offices: All principal cities. • Canada: Toronto and Montreal. • England: Slough. • Holland: Veendam.

Latest Government Adhesive Specifications!

A 14 page chart . . . covering a variety of items, from individual combat rations to carload shipments . . . yours for the asking! 42 specifications tabulated as follows:

SYMBOL (JAN-P-117)

TITLE AND GEN'L DESCRIPTION

Packaging and Packing for Overseas
Shipment Bags, Interior Packaging

ADHESIVE APPLICATION

Class a—Greaseproof

Class b—Waterproof

Class c—Greaseproof and Water-
proof

Class d—Greaseproof, Water-
proof, and Moisture-
vaporproof

WE RECOMMEND . . .

Class a—	Class c—
RESYN 45-172	RESYN 45-172
RESYN 3647	RESYN 3647
RESYN 20R3647	RESYN 20R3647

Class b—	Class d—
RESYN 45-172	RESYN 45-172
RESYN 24R3412	RESYN 3647
RESYN 3647	RESYN 20R3647
RESYN 20R3647	

(actual stock should be tested)

If you handle "DO" rated shipments or any type of military packaging, here's a constant and invaluable source of reference. It's authoritative. It's completely up to date. Compiled after years of close cooperation with a variety of Government agencies.

If the job calls for an adhesive, you'll find the approved one here!

Our Technical Service Department is always at your disposal. For special applications . . . up-to-the-minute specification changes . . . or general information, contact your nearest NATIONAL ADHESIVES office.



WRITE TODAY for samples
and technical information

ROBERT GAIR COMPANY, INC., 150 EAST 44th STREET, NEW YORK • TORONTO

PAPERBOARD • FOLDING CARTONS • SHIPPING CONTAINERS

MARCH 1951

sales are up! thanks to

GAIR

MULTICOLOR CARTONS

GAIR multicolor cartons are winning enthusiastic acclaim everywhere with dealers, consumers and manufacturers.

These smartly designed multicolor cartons are solving packaging problems for many manufacturers who are as meticulous about their packaging as they are about their famous products.

Sales, profits and prestige are increased with the SELL-ON-SIGHT appeal of GAIR multicolor cartons.



Modern packaging

Vol. 24

No. 7

March 1951

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REDINGTON

cartons a range of sizes
fast-efficiently-
for Pfizer



The Fully Automatic REDINGTON Operation . . .

The design of the REDINGTON Type 23, modified to fit special requirements, permits efficient multi-operation cartoning of a whole line, at high speed and with easy, quick changing from size to size.

Chas. Pfizer & Co., Inc., prominent pharmaceutical manufacturer, packs Penicillin in containers of three sizes on their Redington. Volume is large; fast, fool-proof and economical production is essential. The machine can readily and inexpensively be changed to handle other size packages also.

From the intake conveyor belt, the REDINGTON places filled, capped and sealed vials on their sides in pockets of the article conveyor. Next it positions a folded circular, magazine-fed, over the top and down the sides of each vial (REDINGTONS can also be equipped to do the folding, where desirable). As each filled pocket is conveyed to the loading station, the machine feeds a collapsed carton from the magazine, forms it, inserts the vial and circular assembly, and closes the carton by tucking in the end flaps. Automatic skip-feed control prevents feeding a carton to any conveyor pocket which

might reach the loading station empty. The machine also imprints lot number and expiration date on each carton. The entire operation is automatically performed at speeds above 150 per minute.

Thus Pfizer's packaging operation is fast—flexible—simple—low-cost. And since REDINGTON equipment features such advantages as Self-Aligning Roller Bearings, Ground and Polished Shafting, One-Piece Cast Iron Frame and others, Pfizer is assured of continuous efficient performance over a long service-life of the machine.

The best evidence of just how satisfactory a job the REDINGTON is doing for this packager: REDINGTON is now building additional machines for Pfizer.

★ at the PACKAGING SHOW

Atlantic City, April 17-20

Come in and discuss your problems
with us at

BOOTH 480

F.B. ~ since 1897 ~

REDINGTON

CO. 110-112 S. Sangamon Street, Chicago 7, Illinois

MARCH 1951

**AUTOMATIC MACHINES
for
CARTONING
WRAPPING
SPECIAL PACKAGING**

Modern packaging

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indexed in the Industrial Arts Index.



EDITORIAL

Not without hope

PACKAGE PURCHASING TODAY, according to officials of the National Assn. of Purchasing Agents, presents more difficulties than at any time during World War II. The situation, they say, is "not merely 'snafu,' but approaching chaos."

It seems safe to assume, the P.A.s say, that free markets for container procurement are gone for the duration of the present economy. On the darker side, they point out that further limitation orders on container use and diversion of food and essential materials to the military will continue to unbalance packaging supplies. Substitutions and re-use of containers will increase costs because of extra handling. Most packagers will be forced to use larger packages requiring less container material per unit of product and those without adequate tinplate quotas must switch to glass—which will increase pressure for linerboard tonnage for paper containers in which to ship the glass.

Purchasing agents are not given to optimism when, at a time like this, they find themselves suddenly switched from a position of power to the role of a suppliant. It is significant, therefore, that they find the situation not without hope.

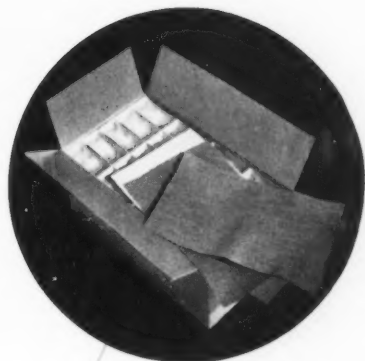
On the brighter side, they see wage and price controls and allocation practices as stabilizing factors. Normal expectancy, they say, would be that, on a Government-allocated basis, the packaging items now in short supply can be provided both for the military and for essential civilian uses. With non-essential uses controlled, essential needs for tinplate can be met. Moves toward standardization of container sizes may help in many fields. Even on so critical a material as polyethylene, the buyers point out that some 80% additional resin capacity, coming in within the next few months, should give some relief.

Not overestimating these glimmers of hope, the P.A.s comment, succinctly: "Container purchasing skill will be tested by the soundness of supplier relationships previously established."

The Editors

WE PACKAGE YOUR PACKAGING

to guard
against loss!



Custom cellophane bags



Printed rolls



ZIP-TAPE

Today, waste in cellophane is irreplaceable. Careful packing and storing can reduce this loss. Dobeckmun is constantly improving its methods of packaging your packaging to protect it against deterioration, especially loss of moisture, which reduces its strength. Here are some of the precautions we take:

Custom cellophane bags: packed in wax-lined cartons, with two absorbent, water-soaked Humidopad corrugated sheets, to add moisture and prevent embrittlement. A dry pad, underneath, prevents dripping on the bags. After long periods of storage, bags can be re-humidified in from 24 to 48 hours by soaking the Humidopads and re-sealing.

Printed rolls: wrapped in moisture-proof cellophane as fast as printed. After slitting, each roll is wrapped in wax paper and shipped in strong, protective cylinders.

Quick-opening ZIP-TAPE: each spool is wrapped in moisture-proof film and shipped in wax-lined containers.

We urge that users of cellophane packaging continue these precautions by storing under adequate humidity. Then, do not open until ready to use.

If we can help in the better use of scarce packaging materials, call on us. While we cannot make new commitments except on priorities, we want to work with you in your long-range planning to take full advantage of films and foils when supplies are adequate. The Dobeckmun Company, Cleveland 1, Ohio. Berkeley 2, California. Bennington, Vermont.





Tupper Seal, air and liquid tight Flexible covers fit, and are included in the sets of all Tupperware Canisters.



The Tupperware 50 oz. Canister is "standard equipped" with the Tupper Seal, air and liquid-tight Flexible Pour All cover.



The Tupper Seal, air and liquid-tight Flexible Pour All cover is used on every Tupperware 20 oz. Canister.



The Tupper Seal, air and liquid-tight, Pour All cover as a cover for 46 oz. cans; Tupperware Sauce Dishes and other containers of metal, glass or pottery. Foods easily dispensed without removing entire cover.



The Tupperware Wonder Bowls are usually fitted with Tupper Seal, air and liquid-tight covers.

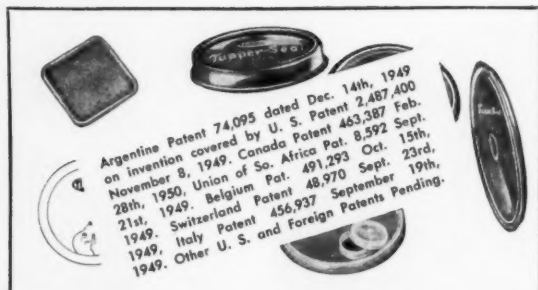


FACTORIES: Farnumsville, Mass., and Cuero, Texas

Manufacturers of — CONSUMER, INDUSTRIAL, PACKAGING AND SCIENTIFIC PRODUCTS

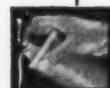
New York Show Rooms 225 Fifth Ave.

ADDRESS ALL COMMUNICATIONS TO: Department A



TUPPER! Seals

air and liquid-tight, flexible covers for Tupperware Tumblers, Canisters, Wonder Bowls, Cereal Bowls and many another container of glass, metal and pottery, the contents of which it is desired to keep fresh and wholesome.



TUPPER!

FORMAL NOTICE!

9th November, 1949

EXCLUSIVE!

U. S. Patent #2,487,400

The Tupper Corporation has attained a position of leadership in this industry by incurring great expense and expending painstaking effort in the development, design, manufacture and exploitation of its many world-known products.

The Tupper Corporation further has anticipated the inevitable attacks to which leadership is subject and has taken measures provided by law to preserve the creative rights to its products, methods and design by patent protection both in the United States and abroad.

Tupper Seals for Tupperware shown in this advertisement are just a few of the forms covered in this manner and are specifically covered by U.S. Patent #2,487,400.

Only the Tupper Corporation, by U.S. Patent #2,487,400 has the right to make, use and vend container closures in connection with any and all types of containers throughout the United States and its territories as covered by the claims of the Patent.

Tupper Corporation will protect, according to law, the exclusive rights above granted

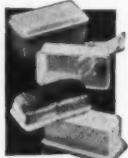
TUPPER CORPORATION

TUPPER CORPORATION

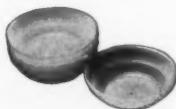


There's a Tupper Seal, air and liquid-tight flexible cover for Tupperware 2, 5, 8 and 12 1/2 oz. Tumblers too, and these Tupper Seal, covers fit many other containers of metal, glass and crockery.

The Tupper Seal, air and liquid-tight flexible Por Tap cover, specially designed as a dispensing cover for specified diameters of containers holding foods such as syrups, salad dressings, catsup.



The cover of the Tupperware Bread Server which serves as a bread tray also is designed to give similar results as Tupper Seal, air and liquid-tight Flexible covers. Keeps contents fresh as no other such container.



When equipped with Tupper Seal, air and liquid-tight, Flexible covers, Tupperware Cereal Bowls serve many another purpose.



The Tupper Seal, air and liquid-tight flexible cover made for Tupperware 8 oz. Tumblers also fits and is sold with all Tupperware Funnels as a base when funnels are used as storage containers.

For *Government Orders*

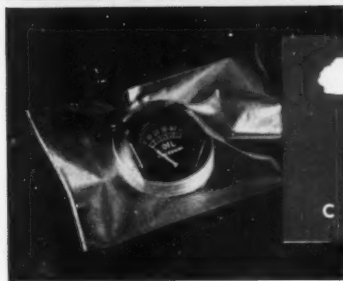
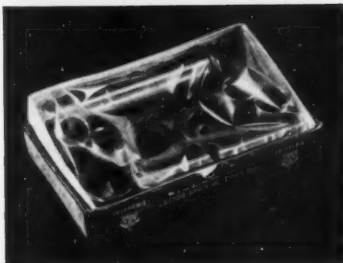


TRALON*

***Polyethylene is first choice for protective packaging. Meets packaging requirements for many government orders.**

Government orders with DO (defense order) rating will be given preferential treatment with respect to production and shipment. Such orders calling for the use of special laminated materials, cellophane, glassine, tralon (polyethylene), pliofilm, acetate, aluminum foil, and paper board "loxtite" partitions will be filled regardless of any material allocation restrictions. Our several plants are ready to serve you in fulfilling package requirements as outlined above.

*Our experts are ready to help solve your packaging problems
We welcome your inquiries — no obligation — write today*



Traver
CORPORATION

Sales Offices in:
Chicago, Denver, New York,
Philadelphia, Pittsburgh,
Cleveland, Kansas City,
St. Louis, Dallas, Detroit,
Oakland, San Antonio.

366 WEST ONTARIO STREET, CHICAGO 10, ILLINOIS

CONVERTERS AND PRINTERS OF CELLOPHANE, PLIOFILM, PLASTICS, ACETATES, FOIL AND GLASSINE

MARCH 1951



THE **PREPO** ★ HANDTORCH

★ *Another*
NEW USE
for the
CROWN
SPRA-TAINER

Made by Pressure Products Corp., Chicago

Safe, convenient and economical, it lights instantly . . . develops a 2200-degree flame . . . readily lends itself to many varied uses in the home and in industry.

The amazing PREPO torch is an ingenious adaptation of the Crown Spra-tainer to a New Idea. Fitted with a special hand-torch assembly (transferable to fresh containers as the fuel supply is exhausted), the Spra-tainer once again opens the way to sales and success for still another product!

Perhaps we can help YOU be the first in YOUR field with a new idea. If your product will spray, ask us about putting it up in the Crown Spra-tainer—FIRST ON THE MARKET, FIRST IN SALES, the original and only low-cost propulsion can styled-for-strength with NO SIDE SEAM, NO TOP SEAM.

FOR MORE
INFORMATION,
MAIL THIS
COUPON

Crown Can Company
Erie Avenue at H Street, Philadelphia 34, Pa.
☐ Please have a Crown Sales Representative call.
☐ Please send more literature on the Spra-tainer.
Name _____
Firm _____
Address _____

CROWN CAN

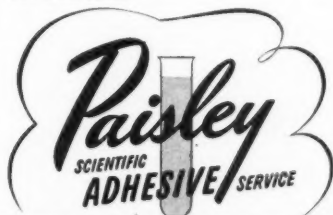
One of America's Leading Can Manufacturers

Plants at Philadelphia, Chicago, Orlando • Branch Offices: New York, Baltimore, Pittsburgh, St. Louis • Division of Crown Cork & Seal Company

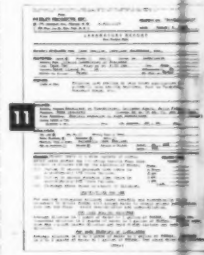
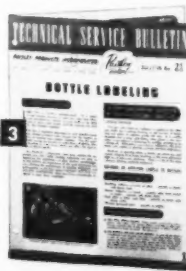
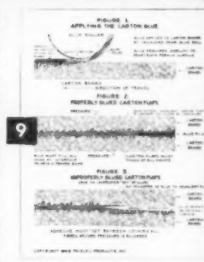
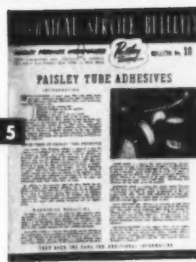
MODERN PACKAGING

Get the **ONE BEST** Adhesive for the Job!

DON'T take chances on the Packaging Adhesives you use! Let our skilled laboratory staff study your needs and *prescribe* the one best Adhesive for each specific labeling or sealing operation in your plant. That's the sure way . . . the safe, modern, economical way to buy the Glues, Pastes or Cements you need. PAISLEY Scientific Adhesive Service helps you eliminate loose, torn, unsightly packages due to using the wrong Adhesive. Our laboratory methods insure that each succeeding shipment measures up to the same high standards of uniform fine quality and performance. Thousands of users from coast-to-coast depend upon Paisley for correct, efficient, economical gluing operations. You, too, can profitably use our *free consulting service*. Use the coupon below. Send today for the literature you want, or for our Adhesive Operation Data Sheet.



Free Laboratory Reports are available giving technical information on a wide variety of Glues, Pastes, Resin Adhesives and Cements for specific operations. Tell us exactly what you need. We'll do the rest!



USERS OF ADHESIVES EVERYWHERE: JUST INDICATE THE ITEMS WANTED AND MAIL!

- | | |
|--|---|
| <input type="checkbox"/> 1. 6-page General Adhesive Folder | <input type="checkbox"/> 8. Cooler-Proof Bottle Glue Bulletin |
| <input type="checkbox"/> 2. Can Labeling Bulletin | <input type="checkbox"/> 9. Carton Glue Application Chart |
| <input type="checkbox"/> 3. Bottle Labeling Bulletin | <input type="checkbox"/> 10. Dilution Calculator |
| <input type="checkbox"/> 4. Grip-Tight Label Paste Bulletin | <input type="checkbox"/> 11. Laboratory Report on the Following Type of Adhesive |
| <input type="checkbox"/> 5. Tube Adhesive Bulletin | <input type="checkbox"/> 12. Adhesive Operation Data Sheet (You fill in and return for laboratory recommendations). |
| <input type="checkbox"/> 6. Shipping Case Sealing Bulletin | |
| <input type="checkbox"/> 7. Flat-Tack Set Up Box Glue Bulletin | |

PAISLEY PRODUCTS INC., 1770 Canalport Ave., Chicago 10, Illinois

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____

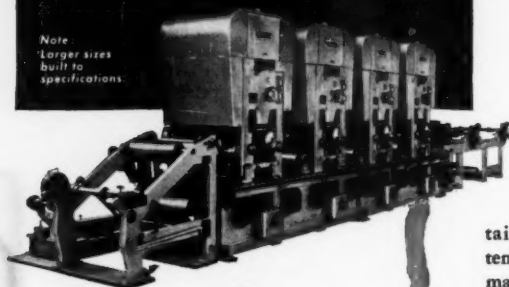
PAISLEY

PRODUCTS INCORPORATED
DIVISION OF
HARRINGTON-NICOL INC.

Manufacturers of Glues - Pastes - Resin Adhesives - Cements and related Chemical Products

	8"	14"	20"	26"	36"	44"
Max. print. width	8"	14"	20"	27"	36"	44"
Max. Web width	9"	15"	21"	28"	37"	45"
Min. Cyl. Circum.	9"	9"	13"	17"	17"	17"
Max. Cyl. Circum.	18"	18"	26"	34"	34"	34"
Production speed (with rewound roll delivery)	Up to 750 feet per minute depending on stock					

Note:
Larger sizes
built to
specifications.

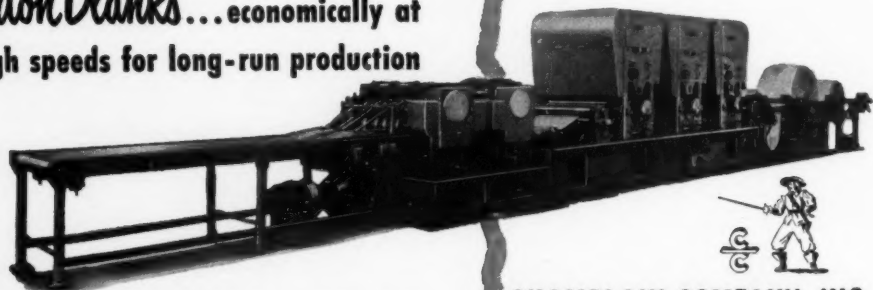


Finest Quality multi-color rotogravure at higher speeds

The standard Champlain Rotogravure Press assures precision registration at high speeds by electric push-button control or automatically by Champlain electric eye control. Highly volatile, fast-drying inks may be used thanks to Champlain's patented "Speedry" fully enclosed ink fountain. Hydraulically controlled constant web tension from unwind through to rewind is automatic. Paper, board, cellophane, pliofilm, foil, glassine are handled with ease, and coatings, varnish, metallic and gloss inks as well as standard gravure inks may be used. Send for complete details on top quality printing at highest speeds.

7451

Carton Blanks...economically at high speeds for long-run production



Custom-built, this Champlain Rotary Carton Press will repay its cost to the average heavy producer of cartons in a very short time. The Rotary Cutter and Creaser is available with the Champlain Rotogravure, Rotary Letterpress and Aniline-Anilox units. Finished carton blanks are produced from roll stock in any number of colors, in glossy inks or varnished, scored, cut and stripped at speeds as high as 500 feet per minute. Ask Champlain for the answer to high-speed, low-cost carton production.

7452

CHAMPLAIN COMPANY, INC.

88 LLEWELLYN AVENUE, BLOOMFIELD, N. J.
CHICAGO OFFICE: 7 W. MADISON ST., CHICAGO 2, ILL.

Champlain manufactures a complete line of rotogravure, aniline, rotary letterpress and allied equipment for packaging and specialty printing.



Service... The right combination
of Experience... Facilities... Materials...



CHICAGO CARTON COMPANY

4200 SOUTH CRAWFORD AVENUE • CHICAGO 32, ILLINOIS
TELEPHONE Virginia 7-2500

FOLDING CARTONS • PLAIN • PRINTED • LAMINATED • PARAFFINED
MARCH 1951



HARD TO BEAT!

Not One, Not Two, But FIVE Conveniently located Betner Plants

make our food packaging service flexible and economical

DEVON, PA.
RICHMOND, VA.
APPLETON, WIS.
PARIS, TEXAS
LOS ANGELES, CAL.

Pinpointed for service to food processors everywhere . . . that's the big idea behind the locating of these Betner Better Bag plants. Where do you have your business? What kind of bag do you need for your product? Betner has it . . . and can get it to you quickly.

Backing up our idea of what a complete bag service should be is a widely-flung sales organization, one or more members of which are near you. Betner Bags are, in effect, as close to you as your classified directory.



NEW! BETNER'S "NO SIFT" BAG for toxic dry chemicals, powders

If there's any bag that positively won't permit dry particles to sift, this is it. Its construction combines special liners with folding, gluing and heat-sealing in such a way that there is virtually "No Sift" for contents.

Betner not only supplies this new bag—now—but special closing machinery for closing it. Your inquiries are welcome. Samples, with full technical information, will be supplied promptly.

LOOK FOR BETNER IN BOOTH NO. 655 at the National Packaging Exposition

Benj C Betner Co DEVON, PA.

BENJ. C. BETNER CO. of VA., Richmond, Va.; BENJ. C. BETNER of WISCONSIN, Appleton, Wisconsin; BENJ. C. BETNER CO., Paris, Texas; BENJ. C. BETNER CO. of CALIFORNIA, Los Angeles, California; SOUTHERN PACKAGING CORPORATION, Affiliate of Benj. C. Betner Co.

A complete bag service—from idea to finished bag to machinery for closing coffee bags and filling and closing liner bags for cartons.

**Interested in a light, shock-proof package
that won't break, crack or shatter
... custom-molded to your needs?**



**PROLON-MOLDED CASE OF POLYETHYLENE
FOR TAP-AND-DIE TOOLS. 5 lbs. lighter ...
50% smaller ... many times more durable and
economical than wood. Soft to protect contents;
so sturdy you can drop it without breaking.**

If you have a special package problem, perhaps Prolon Plastics can figure out the solution. Our services include expert advice on performance and characteristics of the various types of plastics and the various methods of molding ... creating designs and selecting materials

best suited to your needs ... complete die-making, molding, assembly.

During World War II, Prolon Plastics was a major producer of plastic parts ... housings and noses ... for the Proximity Fuse which was rated second only to the Atomic Bomb in military importance. Our skilled craftsmen are currently turning out precision moldings to exacting tolerances! Our equipment and personnel are available for defense work ... immediately.

Whether your requirements are for defense or civilian production, a letter, a wire, or a telephone call will bring one of our planning engineers to your office. No obligation.



**PLANNING • DESIGNING • DIE MAKING • MOLDING
FOR CIVILIAN OR DEFENSE PRODUCTION**

**PROLON PLASTICS, A DIVISION OF PRO-PHY-LAC-TIC BRUSH COMPANY, FLORENCE, MASS.
MARCH 1951**



50 years of

—A GUARANTEE OF

To the business and industrial communities of the United States and Canada, Canco's pioneering in the future will mean what it has meant for the last 50 years:

Not only better containers, but also new containers to meet the needs of our never-static economy...

Plus improved methods of packaging and processing, faster machinery, and the fulfillment of the vision of a research organization without equal in the field.

In the distributing industries, Canco's pioneering will continue to pay dividends in easier, safer, and more



The sanitary can—most famous of all metal containers—made commercial canning of fruits and vegetables possible—revolutionized the grocery business—changed America's eating habits.

American

CONTAINERS . . . to help people live better



The "Double-Tite" paint can expanded the paint business—brought ready-mixed paints to millions by making it practical for these paints to be packed and shipped everywhere.



The vacuum-pack coffee can—permitted roasters to protect from roaster to consumer the flavor and aroma of fresh-roasted coffee.



Canco's Paper Milk Container—gave tremendous impetus to store milk sales for dairies all across the country—allowed grocers to give housewives milk in a sanitary, easy-to-carry, one-way container.

MODERN PACKAGING

Canco Pioneering

LEADERSHIP IN THE DAYS AHEAD.

economical handling of packaged goods.

And to everyone who eats, patronizes a drugstore, drives a car, maintains a home, serves in our armed forces—Canco's pioneering will continue to make possible a myriad of products . . . of better quality.

As we look ahead with determined resolve to the next half-century, we affirm this steadfast purpose: *Canco will contribute even more to industry and government, and bring even better living to even more people.*

On this page are familiar containers of today pioneered by Canco.



The meat can boomed the canned meat business—provided housewives with a new and wide variety of readily prepared meats.



An adaptation of the sanitary can, this container assured motorists of getting refinery-sealed motor oil. Gave huge boost to sales in service stations in every state.

Can Company

CANCO

New York • Chicago • San Francisco
Hamilton, Canada



The beer can trademarked "Keg-lined"—the first non-returnable container for beer and ale—brought new conveniences to beer drinkers everywhere—lowered distribution cost.



This container protected first-aid units of blood plasma in World War II. An adaptation of Canco's tennis ball can.



The salt container prevented excessive caking which took place in the old-fashioned bags. The aluminum pouring spout made easier the housewife's task.

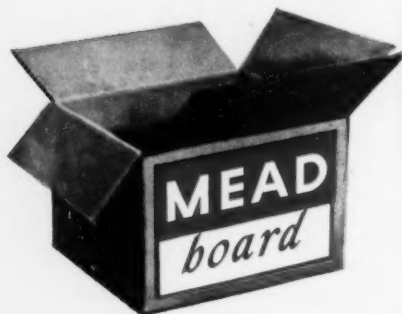


BOOKWORMS' BINGE

Volumes of inspiration, edification, education, and just books have gushed from the nation's presses in unprecedented flood since the war. Books sold in 1950 approached the half-billion mark. Obviously, lots of people like to read, and nearly as many seem convinced that they can write.

This insatiable thirst for the printed word—from the Bible to geographies, best sellers, two-bit murderfests, cookbooks, and five-foot shelves of the classics—is very gratifying indeed. We commend the sound judgment which sends most of these books on their way to retail outlets, mail-order customers, schools, and the like safely sheathed in corrugated board or packed in corrugated cases.

Of the making of books and the reading of them there is, we trust, no end. We are happy to encourage this thirst for enlightenment by furnishing Chestnut Cover Board as well as superstrong MEAD Corrugating and Liners. MEAD .009 Chestnut Corrugating is expertly made of tough chestnut and other hardwood fibres to cushion the shock of rough handling. It has provided good going for vulnerable merchandise these two decades and more.



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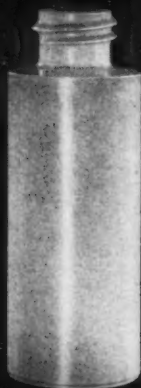
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Polyethylene

Plastic Bottle

This is *the* bottle with consumer appeals so strong they actually help sell your product!

It's unbreakable—a powerful consumer selling point on safety and thriftiness.

It's lightweight—takes up less space (and incidentally cuts your shipping cost).

It's a "squeeze bottle"—can be readily adapted to use as a stream—as a spray—as a sprinkler finish.

Our stock bottle is available in 1—2—4—8 ounce sizes. Through a special printing process we can print your label or design right on the bottle.

In addition to the production of this stock bottle and stock closure, we also custom make other thermoplastic bottles, closures and atomizers. You can depend upon their being made with the same high standards of craftsmanship which keynote all Mills plastic products.

For more information on our custom molding service, or for a free sample bottle, write us or our sales agent today.

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Sales Agent: W. BRAUN & COMPANY

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You can take your choice when you stick to the Shupak line because here you'll find them all . . . hot peppers, sweet peppers, pickles, pimentoes, and a host of other tempting products that are just right for everyday meals and special occasions alike.*

And when you come to Crown for your closure needs, you have a wide selection, too. Here you will find the closure and liner that's been proved scientifically correct for your product.

Don't take a chance on closure satisfaction. Take advantage of Crown's sealing experience and laboratory facilities . . . they're yours for the asking. Crown Cork & Seal Company, Baltimore 3, Maryland. *World's Largest Makers of Metal Closures.*



* Packed by Louis Shupak Co., Philadelphia, Penna.

CROWN CLOSURES

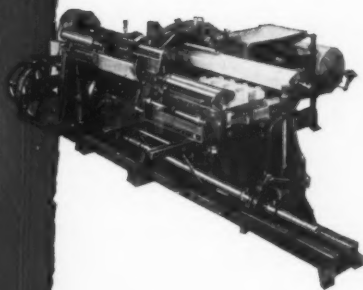
Approved by millions of housewives

Visit Crown in Booths 370-372 at the National Packaging Exposition — Convention Hall in Atlantic City — April 17-20.

PAPER WOUND CANS FAVORED TO REDUCE OVERALL COSTS



The number of products shipped and marketed in Knowlton Convolute Wound Paper Cans is constantly increasing. Tests and comparisons show convolute wound paper cans are strong—and can stand unusually high pressures. At the same time, these containers cost less to produce and less to ship. Up to 150 can bodies per minute with single or multiple labeling from 1 to 5 labels per cycle can be turned out on the Knowlton Convolute Paper Can Winder—operates continuously on wide variety of shapes from 1 1/4" to 8" diameter or across diagonals. Let us show you how the Convolute Paper Can Winder will fit in your business.



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- Single & Double Scorers
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- Single stayers (All sizes)
- Universal Coverers, Power (All sizes)
- Hand Power Coverers (All sizes)
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- Toppers (All sizes)
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- Flange Benders (Automatic)
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PAPER TUBE & CAN

- Automatic Convolute Paper Can Winders
- Spiral Winder (Light and Heavy Wall)
- Spiral Cut-offs
- Tube Recutters
- Lap Tube Rollers

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Sealing Strength, Hardness, Gloss, Blocking Resistance — These are the qualities you demand of paper coated with unmodified paraffin wax.

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SPECIFICATION BALANCE of each ingredient is also necessary in Polythene — Microcrystalline — Paraffin mixtures for the New Mirror Gloss Coatings. Best all-around performance demands it!

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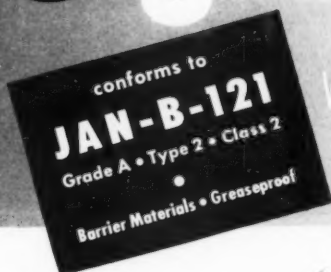
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WAXED • CREPED • MOLDABLE



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is a heavy duty wrap, wax impregnated, and creped for closely molding to various shaped pieces without rupturing. It fully conforms to the requirements of

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other grades listed at right

JAN-B-121

Barrier Materials • Greaseproof

JAN-P-117

Bags • Interior Packaging

All Grades available on DO orders only



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for samples and specifications of Self Wrap and other HPS materials for Government packaging.

Arctic Pak 1 • Flat

POLYETHYLENE (LOXOL PROCESS) COATED KRAFT
JAN-B-121 • Grade A • Type 1 • Class 1. Flexible to 65° below zero. Heat Sealable, greaseproof, waterproof.

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JAN-B-121 • Grade A • Type 1 • Class 1. 15% stretch; molds to any contour, Heat Sealable, greaseproof, waterproof.

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JAN-P-117 • Grade A • Type 1. Classes a-b-and c. Heat Sealable, greaseproof, waterproof.

Lamine 1

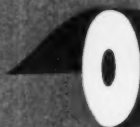
GLASSINE LAMINATED TO KRAFT
JAN-B-121 • Grade A • Type 1 • Class 1. High tensile strength; greaseproof.

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GLASSINE LAMINATED TO KRAFT
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is fully experienced and prepared to assist you in working out problems related to government or civilian packaging. Ask for complete test, size, and price data on all of the above grades.



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(but even that isn't enough!)

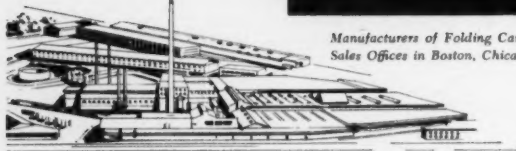
Even the millions of dollars worth of machines and equipment we have installed during recent years can't keep up with the unprecedented demand for paperboard and cartons. And with growing material scarcities, with growing government and other essential needs, the situation will become even more acute.

But you can be sure that the 2,000 men and women at Gardner will give their all-out best to meet the problems which lie ahead.

For our customers...for our country.

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CUTS COSTS...CUTS TIME
on LCL and LTL orders

MODERN PACKAGING

full speed



CARTON CO.

Tri-State RIGID PLASTIC BOXES give...



A *Hearty* LOOK
TO A *Hearty*
TREAT

Hearty Brands, Bronx, N. Y.—serving supermarkets, food and delicatessen stores in the Metropolitan New York area—chooses Tri-State Rigid Plastic Boxes for packaging perishables to build new volume at the point-of-sale.

Packing their Macaroni Salad, Potato Salad, Cole Slaw and Fruit Gelatin Dessert in Tri-State's Stock Container No. 420 F (Diam. 3¾" x 2¾" deep), Hearty captures an increasingly greater share of its highly competitive market with a reuseable premium package. The Tri-State Rigid Plastic Box preserves perishables longer, permits 100 percent visibility of merchandise and provides ample area for attractive brand identification. Combining shatterproof safety with

the sight-selling appeal of glass, packaging in transparent plastic—in Tri-State Rigid Plastic—gives these "Hearty" Brand delicacies the extra feature of a bonus utility box which customers can use again and again. And Tri-State's close production tolerances permit safe sealing of Stock Container No. 420 F without the use of adhesive material.

Packagers of delicacies, dairy products, confections—food items of many kinds—can build phenomenal new sales futures for their products, too, by choosing a Stock Container from America's greatest line of Rigid Plastic Boxes. Or we'll be glad to solve your plastic packaging problem individually, by molding to your specifications.



The best Rigid Plastic Boxes are Injection Molded by
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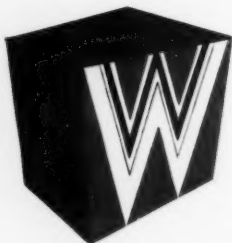
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the clarity of color . . .
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colorful ink, make
WYOMISSING Glazed Papers
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package designers. This
new Berkshire Stocking Box
is an excellent example
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For the sake of
"a good appearance,"
when you think of
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WYOMISSING Papers!

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flat tubing

GER-PAK is Gering's own rigidly processed virgin Polyethylene Film . . . **UNIFORM** in every required detail of width and gauge control . . . **FLEXIBLE** at low temperatures . . . **HEAT SEALABLE** . . . **NON-TOXIC** . . . **ODORLESS**.

GER-PAK resists alcohols, acids, alkalies . . . is stable to varying temperatures and humidity changes. It is supplied up to 60" wide, from .0015 to .004 gauge.

APPLICATIONS: Carton and Barrel liners; packaging Frozen and Fresh Poultry, Fish, Fruits, Vegetables, Meats, Dehydrated Products; to protect the goodness . . . and point up the appeal of . . . Flowers, Candy, Cosmetics, etc.



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MATERIALS

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KENILWORTH CABLE ADDRESS: GERING **NEW JERSEY**



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THE READING ROOM OF THE ALGONQUIN CLUB, BOSTON. Photograph by Nickolas Muray

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The name, McLaurin-Jones Company is your assurance of superior-quality papers for printing and packaging purposes—a name that is famous throughout the world for generations of skill and craftsmanship in the creation of new and improved papers for business and industry.

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Waterproof caseliner gluing	CASCOLA WP-311* . . . ready to use, highly water-resistant, fast set, meets Spec. JAN-P-140.
Paper labeling on glass	CASCO LP-83 . . . ready to use, highly water-resistant, fast set, heavy viscosity. CASCO LP-85 . . . ready to use, highly water-resistant, fast set, thinner viscosity, meets Spec. UM-186, Type I.
Foil laminating	CASCO Flexible Cement NT-539* . . . ready to use, good heat and water resistance, sets at room temperature, meets Spec. JAN-P-117.
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Water resistant, folding boxes	CASCOLA CS-334 (for uncoated board) . . . ready to use, good dry strength, highly water-resistant, fast set. CASCO Flexible Cement NT-9241-D (for dry waxed board) . . . ready to use, heat-and-water-resistant, sets at room temperature. CASCOREZ CV-721* (for untreated board) . . . ready to use, water-resistant, fast set. CASCOREZ CV-740* (for waxed board side seaming) . . . ready to use, water-resistant, fast set. CASCOREZ CV-743* (for window-gluing waxed or unwaxed board) . . . ready to use, water-resistant, moderate speed of set.

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● This chart of glues available for immediate shipment should enable you to select the right glue to meet any of your problems requiring a paper or labeling glue. Borden's Chemical Division has long specialized in quality-controlled glues for packaging, labeling and laminating. If we can be of assistance to you in the solution of your military or everyday gluing problems, fill in the attached coupon.

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MARCH 1951

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The tubes it gives birth to will protect the product, give it sparkling sales appeal, fill at low cost. They will be as trouble-free as tubes can be.

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The first aniline ink that can be used — without any alteration whatever — for printing every type of CELLOPHANE, FOIL, other specialty stocks ... and print them better! Features exceptionally strong adhesion ... excellent printability ... high block point. Premium-quality, multi-purpose "400 SERIES" ink also puts an end to the problem of special inks for different stocks — helps you slash ink inventory, reduce "left-over" losses, cut press down-time.

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... the first 100% pigmented aniline ink, now a favorite with converters and package printers all over the world. Delivers smooth, sparkling, razor-sharp prints on CELLOPHANE, GLASSINE, FOIL, other non-absorbent stocks.

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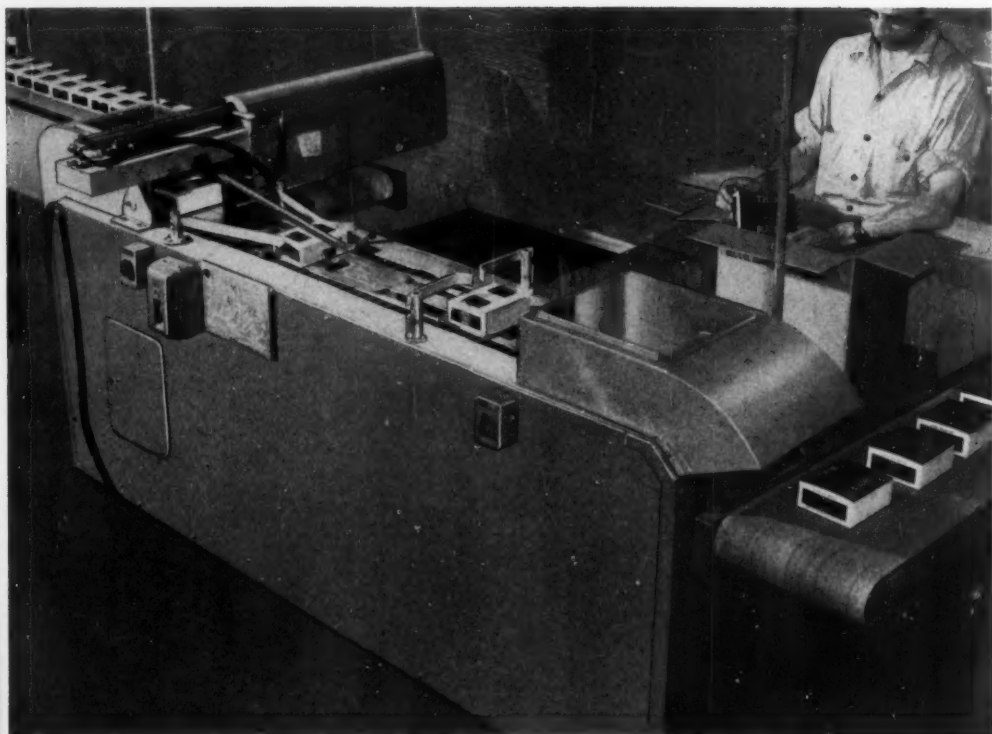


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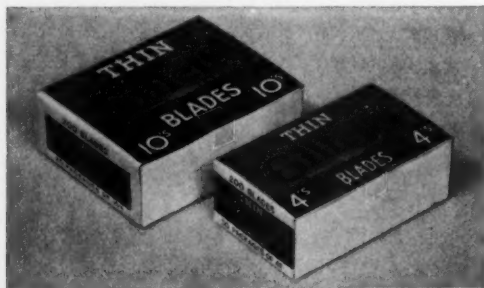
Gillette Shaves Packaging Costs!

Automatic box sealing unit needs NO OPERATOR

Six different sizes of boxes may be sealed automatically by this highspeed machine installed in the Gillette Safety Razor Co. plant in Boston. Designed by 3M engineers, the machine centers each box regardless of size and applies a neat strip of transparent "SCOTCH" Cellophane Tape. The machine handles 60 boxes a

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Why not let us go to work on any packaging problem you may have? For a free consultation with our tape engineers, write today to Dept. MP3, Minnesota Mining & Mfg. Co., St. Paul 6, Minn.



TRANSPARENT "SCOTCH" CELLOPHANE TAPE does a neat sealing job—does not cover up label or printed instructions, does not detract from box design. Provides a firm, positive seal that will not dry out or loosen, yet permits easy opening of box. Use "SCOTCH" Pressure-sensitive Tapes, too, for holding, protecting and splicing applications.



The term "SCOTCH" and the plaid design are registered trade marks for the more than 100 pressure-sensitive adhesive tapes made in U. S. A. by the MINNESOTA MINING & MFG. CO., St. Paul 6, Minn., also makers of "Scotch" Sound Recording Tape, "Underseal" Rubberized Coating, "Scotch-lite" Reflective Sheeting, "Safety-Walk" Non-Slip Surfacing, "3M" Abrasives, "3M" Adhesives. General Export: Durez Abrasives Corp., New Rochelle, N. Y. In Canada: Canadian Durez Abrasives Ltd., Brantford, Ontario.



E. N. Rowell Co. Inc.
Manufacturers of Fine Paper Boxes
BATAVIA, N. Y.

Wrap-King
wraps odd shapes
at 1000% savings
in time

**a boon to manufacturers
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Wraps ration items such as Cocoa Beverage disc, Starch Jelly disc, Chocolate disc, Life Raft Bars, Water Purifying Brickets, Para-Blocks . . . in fact Wrap-King wraps any item . . . whether it be as hard as a bearing . . . sticky as tape . . . or as soft as a doughnut . . . it's all the same to Wrap-King.

BOOTH 773
**NATIONAL PACKAGING
EXPOSITION**
APRIL 17 to 20

Wraps bearings with .002" thick foil to meet Army and Navy specifications. Girls formerly hand wrapped only 10 per minute . . . Wrap-King now does job at 125 per minute, plus savings on material and ability to easily meet shipping dates.

Write for further information . . . see how Wrap-King can cut your packaging cost . . . then get your order in for this amazing machine to assure early delivery.

Manufactured By
WRAPPING MACHINE SERVICE & TOOL CO.

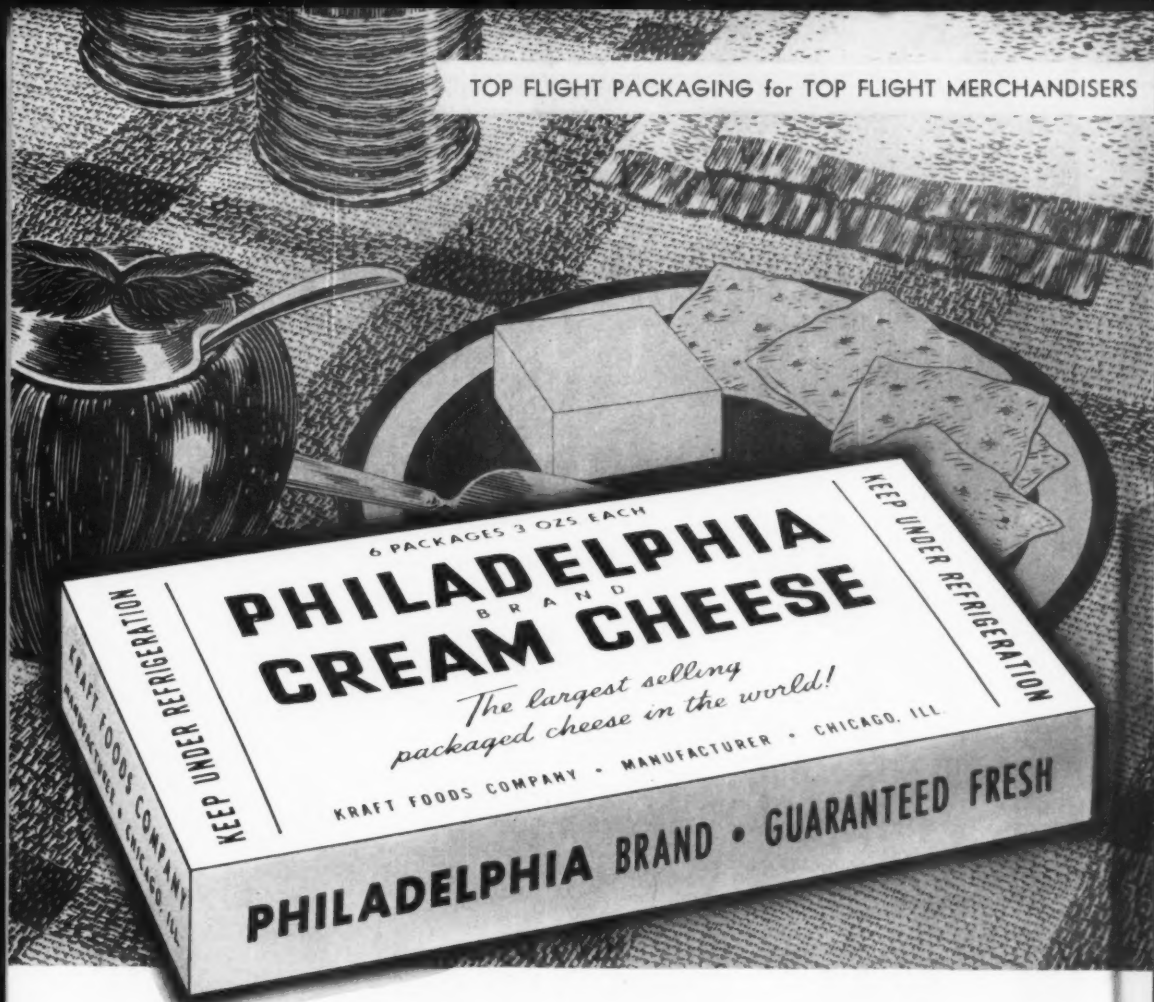
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TOP FLIGHT PACKAGING for TOP FLIGHT MERCHANDISERS



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*Planned
Packaging*
**MOVES
MERCHANDISE**



THE OHIO BOXBOARD CO.

"Home of PLANNED PACKAGING"

RITTMAN • OHIO

Manufacturers of paper board, folding boxes, corrugated and fibre shipping containers, and converted specialties
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Meet the BEMIS Small Bag Family

These Bemis Bags belong on your packaging team. Here's why:
They fill and pack economically. That helps your costs. They give
unbeatable display to your brand. That helps your sales. They are
good packages and consumers realize it. And that helps everybody.
Get the full details of the Bemis small bag story. Ask the Bemis man.

A Winner for You



Bemis DELTASEAL Bags (flat-tube) have the exclusive Pull-Cut-Pour Spout. The white coated or bleached paper makes your brand stand out on all sides. The squared shape makes for eye-filling mass displays. Blue-lined, if you prefer, (makes white flour look whiter).



Bemis FLEXI-CARTON—Intuck bags that square up beautifully and billboard your colorful brand all around. Like Deltaseal, these are economical bags worthy of your good product. A variety of types of closures available.



Bemis CELLOPHANE Bags are increasingly preferred for meal and granular products. Cellophane is a showcase for your merchandise . . . really turns the spotlight on it. And the brilliant color printing on Bemis Cellophane Bags shouts for attention...you must see it!

There is a
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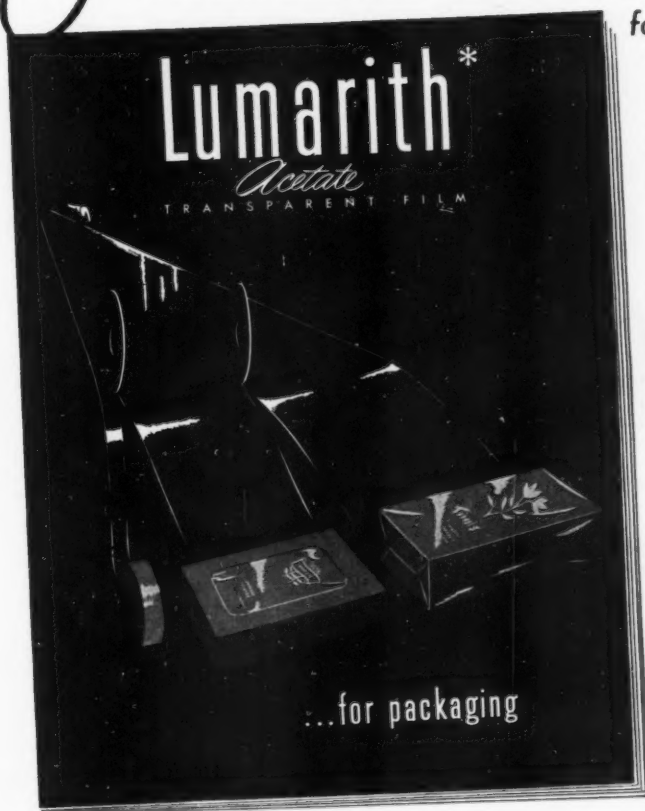
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- Mechanical and Physical Properties
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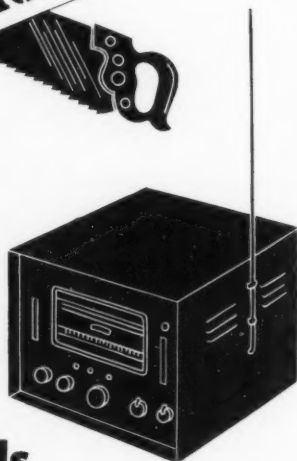
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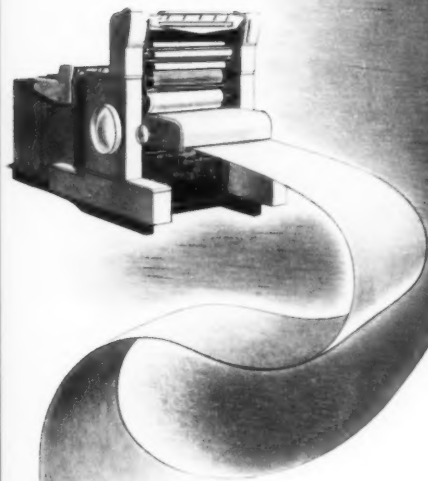
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Inventory Index
Canton Postcard Bristol

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BOND, MIMEOGRAPH

Ariel Bond
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ENVELOPE PAPER

Radiant White Envelope
White Foldur Kraft Envelope
Suntan Kraft Envelope
Ne'er Tear Envelope
Colored Wave Envelope

TAG

Tuf-Tear Tag

COATED POSTCARD

Campaign Postcard

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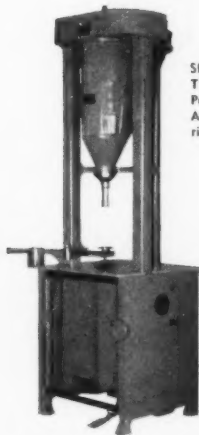
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The Universal Filler folder explains the advantages of this S & S filling machine to you. Our various customers fill more than 150 different kinds of materials on the Universal Filler . . . Drugs . . . Cosmetics . . . Foods . . . and other household products; powders and pastes and free-flowing materials; products which must be packed and crowded into the container; products which must be handled gently, without pressure. (In fact, everything but solids and liquids.) And so versatile is this Filler that one customer fills 38, another 31, and another 24 different kinds of materials on one machine.

Write for your copy — see how this versatile Filler (4 machines in 1 efficient unit) will help you with your filling problems.

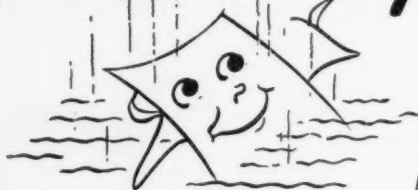
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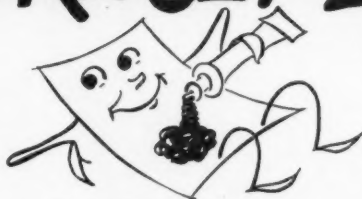
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GREASE ME!



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Wonderful for:

Butter wrappers
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GREASE-RESISTING PARCHMENT

Yes, Patapar Vegetable Parchment welcomes water, grease, even a good boiling! Its appetizingly clean, white surface lends itself to beautiful color printing.

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The easy opening RITZ CRACKERS carton is handled on PNEUMATIC MACHINES

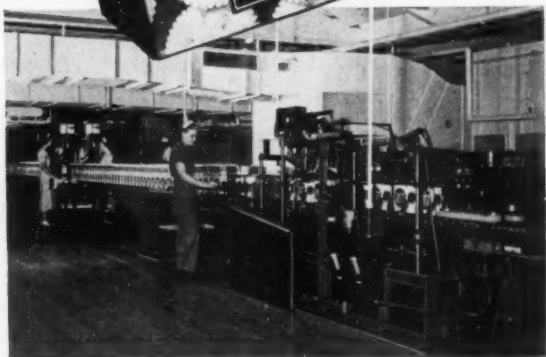
PACKAGING of such a tremendous family favorite as RITZ CRACKERS is in the nature of a colossal assignment. You've got to have good protection for such a perishable product. You've got to have a carton that opens easily, that's attractive—and strong enough to stand up under plenty of handling. And you've got to turn them out in a hurry!

It's no trick at all for National Biscuit Company and their Pneumatic packaging equipment. And it's the same story with leading producers of all kinds of packaged products the country over. You'll find more of them using Pneumatic machines than any other kind. Why? Because of their smooth, speedy, trouble free performance—and because, when all is said and done, the money-saving efficiency of Pneumatic machines means—"lower cost per container".

PNEUMATIC SCALE CORP., LTD., 82 Newport Avenue, Quincy 71, Massachusetts. Branch Offices in New York, New York; Chicago, Illinois; San Francisco and Los Angeles, California; Seattle, Washington.

POWDER FILLERS

VACUFLOW POWDER FILLING MACHINES are now manufactured and sold by Pneumatic Scale Corp., Ltd. Rotary and single head units are available for accurate, dustless handling of freeflowing and non-freeflowing materials. Speeds range from 20 to 300 per minute. Pneumatic invites your inquiries on powder filling problems.

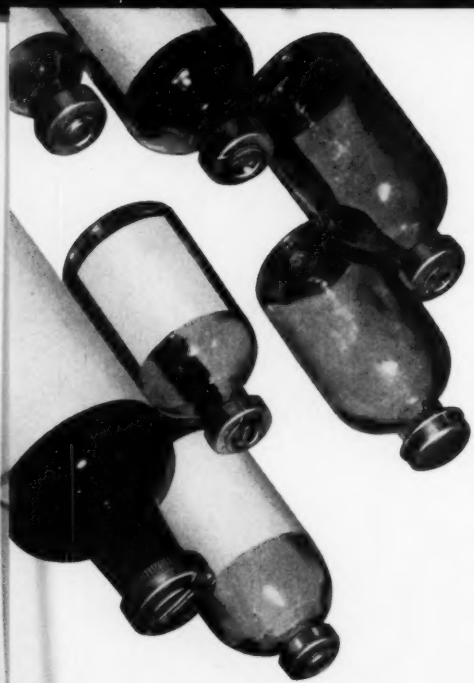


Installation of Pneumatic top closure equipment at new Houston Bakery of National Biscuit Company

PNEUMATIC

SEE OUR EXHIBIT • Booth 333, National Packaging Exposition, Atlantic City • April 17-20

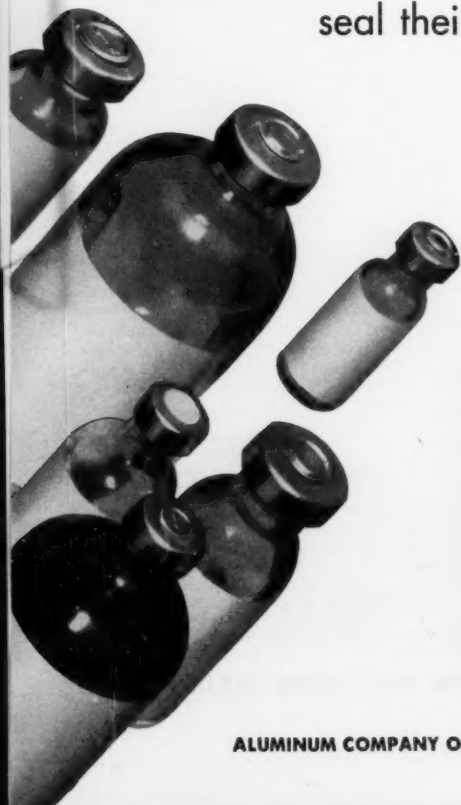
PACKAGING AND BOTTLING MACHINERY



Nearly all leading manufacturers of injectables
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because **Alcoa Stericaps** give them...



A TAMPERPROOF SEAL

the outer tear cap immediately reveals tampering

ASSURANCE OF STERILITY

this cover cap guards against superficial contamination after opening

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this inner ferrule seals the contents securely—keeps out everything but the needle.

This three-way protection assures sterility until the last cc is used. Write for your free copy of our catalog.

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Biggest Value You Can Buy in a Folding Carton...



Here are a few of the famous names for which we have produced cartons with a **SELLING IDEA**...

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The SELLING IDEA!

• Yes, the biggest value you can buy in a folding carton is there before the carton is made. It's the basic thought... the Selling Idea... the one raw material that has value beyond price. For the Idea is the thing that makes the whole carton come alive... stand out on the shelf or counter... reach for the customer's eye... fix the name of your product in her memory and buying habit.

Selling Ideas don't come easily. They're the product of know-how, experience, talent, hard work. For more than half a century, United Board & Carton has demonstrated its ability to create sound Selling Ideas for many nationally-known companies. Ideas that fit the product, the market and the job to be done! It will cost you nothing to find out. Let's talk over your problem.



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Board Mills: LOCKPORT, THOMSON, N. Y., URBANA, O.; Carton Plants: SYRACUSE, VICTORY MILLS, CONHOES, BROOKLYN, N. Y., SPRINGFIELD, O.

Riegel Invites Your Inquiries ON CUSTOM-COATING of POLYETHYLENE PACKAGING PAPERS

● **New equipment at Riegel Mills extrudes polyethylene film (without laminating agent) on endless variety of lightweight packaging papers... foil, glassines, greaseproofs, sulphites... as well as on heavy paper and board.**

A vast new field of applications for polyethylene has been created by Riegel's extrusion of this new film on nearly all types of lightweight packaging paper. Such combinations provide technical qualities impossible to secure with polyethylene or paper alone. Printing costs are reduced, body and stiffness easily supplied and remarkably tight seals obtained at high operating speeds... often at lower cost than film alone or present materials. Here are the facts.

How Polyethylene Offers Better Protection. Riegel polyethylene-coated papers have excellent resistance to water, moisture, chemicals and solvents. Even acids and alkalis can be packaged. Moisture vapor transmission resistance and flexibility are extremely good at low temperatures, making ideal packaging papers for the frozen food field. There is excellent resistance to animal and vegetable oils and fats, and good resistance to mineral oils. Polyethylene-coated papers are tasteless, odorless and nontoxic. They will not crack under repeated folding at minus 40° F. They not only maintain their protective qualities at sub-zero temperatures but will hold hot coffee or soup satisfactorily. Blocking resistance is excellent even under tropical conditions.

Polyethylene papers have tough scuff resistance and a puncture resistant surface.

In appearance Riegel polyethylene-coated papers have a high gloss and offer excellent sales appeal.

Perfect Packages at High Speed. Riegel polyethylene-coated papers form smoothly at high speed. They can be heat-sealed at 250° F. Strong fast seals can be made coating-to-coating or coating-to-base paper. The extensibility of the coating under stress allows it to retain its form as a film even if the paper fibers are torn apart. Heat sealing is recommended for these papers although some rubber base adhesives have given good results.

Extensive Laboratory Facilities Ready to Check Your Application. Because polyethylene has a few peculiarities, every new application should be checked carefully, whether it be all film or a film and glassine combination. Our Paper Performance Laboratory will thoroughly check each application individually. In many cases a special Riegel paper can be selected to supplement the properties of the polyethylene — in all cases our packaging engineers will be able to choose from over 600 different Riegel papers to give you the best combination for your specific requirements.

We Are Equipped to Coat Your Paper to Order.

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342 Madison Avenue, New York 17, N. Y.**

MODERN PACKAGING



Blue stands out and says
BUY ME

Half container . . . half salesman. Maryland Blue Glass acts as a powerful advertising, merchandising and selling tool for your product . . . in stores or in the home. Blue is easier to see . . . easier to remember. Blue gives your product the quality and distinction that says, "Buy Me!" So follow the lead of many famous brands . . . pack to attract in Maryland Blue Glass. Write today for samples. MARYLAND GLASS CORPORATION, BALTIMORE 30, MARYLAND.

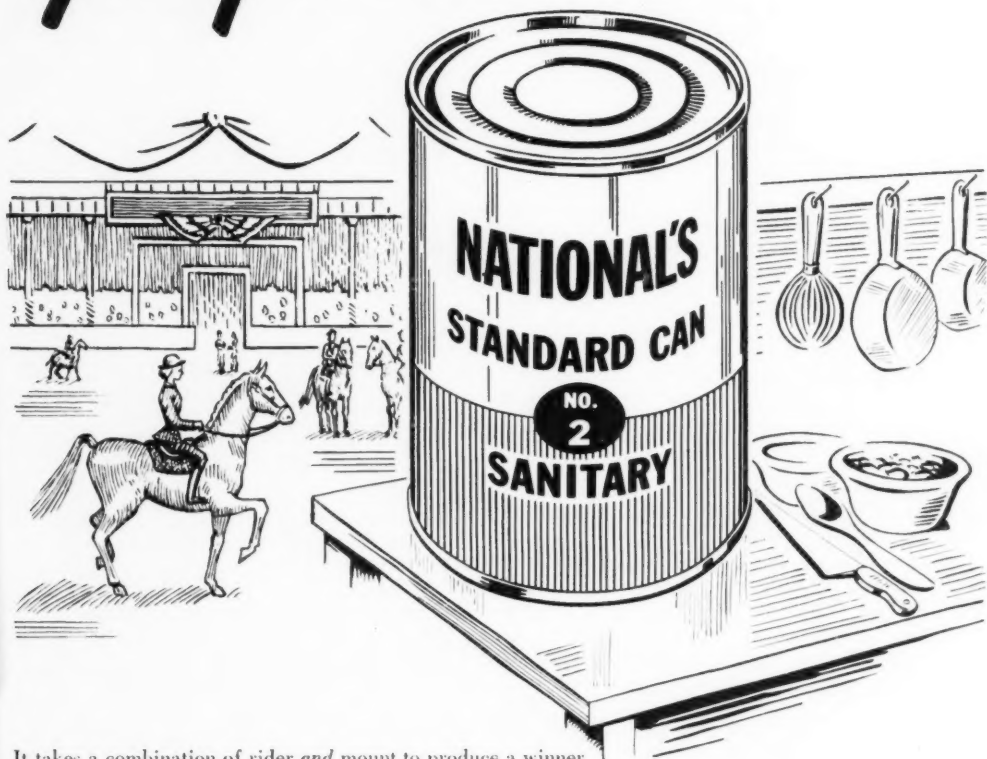
PACK TO ATTRACT IN

*Maryland
Blue*

Also available in Clear Glass

NATIONAL CANS

Going Places---



It takes a combination of rider *and* mount to produce a winner

...just as leading packers of foods count on

NATIONAL CAN to give them a winning combination.

No matter what you pack in cans...count on NATIONAL CAN...for the

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fine lithographic reproduction—to keep your product

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NATIONAL CAN

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We'll be seeing you at the POPAI Symposium in New York April 3rd and 4th! Let's get together — be sure to drop in at our booth!

This 24-sheet lithographed poster advertising "Candy Cupboard" Chocolates is but one of many pieces handled by Forbes Lithograph for this client.



This transparent cellophane wrap, rotogravure printed by Forbes, is used for wrapping special caramel and nougat pieces in the candy box.

from 24-SHEET to CARMEL WRAP

"CANDY CUPBOARD" GAINS MERCHANDISING IMPACT

FROM **FORBES** FOLLOW-THROUGH



Handsome 5-color wrapper is letterpress printed and embossed by Forbes.

Cellophane holiday over-wraps are rotogravure printed by Forbes.

4-color, 4-page insert is lithographed by Forbes.

Forbes' unique facilities in lithography, letterpress, rotogravure and die stamping are all under one-roof management control



8-color, easel-back window display is lithographed by Forbes.



Small, easel-backed lithographed window cards are also used as counter cards.



Old fashioned New England goodness...

Colorful car cards, lithographed by Forbes, are also run off on light stock for use as window streamers.

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Lovell and Coe's advertising agency is C. J. LaRoche & Co., Inc.

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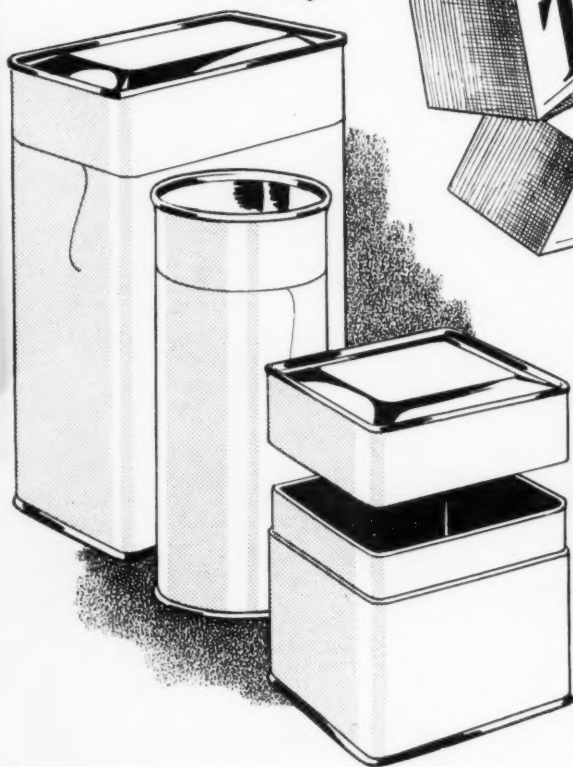
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Factory-sealed, tamper-proof!

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No Job too big...

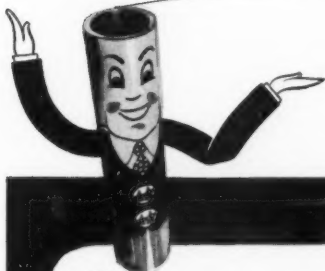


Sefton
FIBRE CAN
COMPANY

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PAPER CANS... SPIRAL AND CONVOLUTE
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April 17-20, 1951.

Package design hits a new high
with **SYLVANIA**
CELLOPHANE

TAKE the wraps off imagination. Specify Sylvania Cellophane for your packaging. This versatile, economical film lends itself to almost any design . . . enhances the appearance . . . gives needed protection to almost any product. It comes with controlled moisture protection—in different gauges. In hand-wrapping or on high speed automatic equipment it heat seals strongly and instantaneously. It can be economically printed on fast presses with lustrous color effects.

Sylvania is always ready to help you with your packaging problems. Discuss them with your Sylvania representative or write us mentioning the specific application in which you are interested. Address: Market Development, Dept. MP-3.

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Only the best is

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**AUTOMATIC PACKAGING
EQUIPMENT**

STANDARD-KHAPP

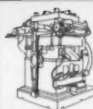
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GLASS DIVISION

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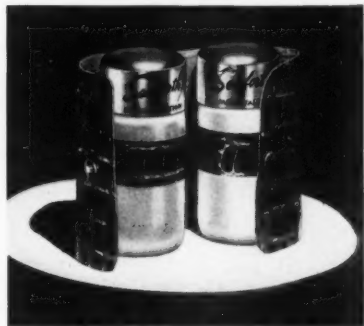
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Division of Hartford-Empire Company
HUDSON, NEW YORK



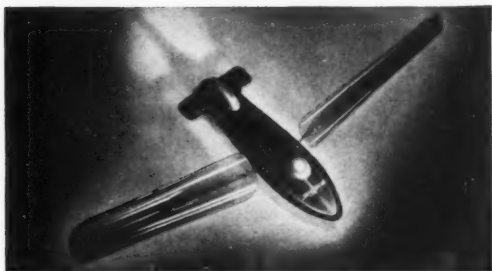
For Courtley

an embossed, flask-shaped Plaxpak bottle provides a handy, handsome, lightweight container for Antiseptic Body Powder. A quick squeeze produces a fine powder spray.



For Seaforth

Plaxpak bottles form a compact traveler's twosome. Light and smash-proof, the kit can be squashed into a suitcase and hauled anywhere that duty calls. Kit has Seaforth Shaving Lotion and Men's Talc.



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this sleek but tough airplane of Plax Polyflex* means hours and hours of outdoor fun. Polyflex is oriented polystyrene sheet — strong, easy to work, and low in cost.



For Richard Hudnut's

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good enough

HELPFUL PLAX LITERATURE

Catalogs on Plaxpak bottles and other Plax products are available on request. Also available is a booklet "Fabrication of Polystyrene."



PLAX CORPORATION

Subsidiary of Hartford-Empire Company
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In Canada, Plax Canada, Ltd., Toronto
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Plax blow-molded products are made under the following U. S. Patents: 2128239, 2175053, 2175054, 2230188, 2230190, 2266750, 2283751, 2349176, 2349177, 2349178. *Reg. U.S. Pat. Off.

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ASSURED UNIFORMITY
BRIGHT FAST AND SOIL RESISTANT COLOR
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CUSTOM MADE FOR EVERY ORDER
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Packaging in units facilitates consumer purchasing.

Whatever your product . . . whatever your combination of parts
. . . we will design and deliver quickly the type of container that will
meet your individual needs.

Ask for our special folder and helpful suggestions.

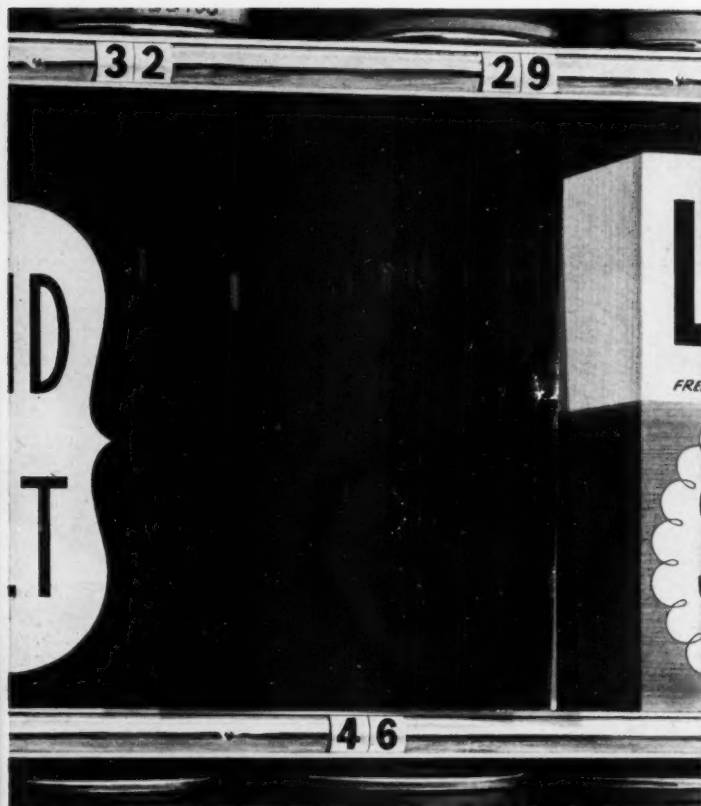
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• Spirally Wound Tubes and Cores for all Purposes

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Flavor-Saver!

MORE important today than its sales appeal is the ability of Kaiser Aluminum Foil to assure a vapor-tight package that preserves food flavor, protects its freshness.

The ability of Kaiser Aluminum Foil to protect goods is a big reason why it is vital to our preparedness program . . . not only to protect food, but also medicine, film, machine parts.

To help meet critical aluminum needs, Kaiser Aluminum has begun a vast expansion program which will greatly increase production of primary aluminum. When conditions permit, this additional supply will be shared by manufacturers and converters of aluminum foil for civilian uses.

Meanwhile, if you have any foil problems, call any office listed below.

Kaiser Aluminum

Setting the pace . . . through quality and service

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EXPERIENCE MEANS QUALITY! Operators with years of experience in the aluminum foil industry assure you that the most exacting standards will be met.



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FAST FOLLOW-THROUGH! Personal attention to your order cuts red tape . . . enables you to schedule more closely.



INDIVIDUAL ATTENTION! Experts work directly with you to make sure that foil is tailored to your exact needs. Call us.

Kimpak* Float Packaging



TELEVISION SET
Admiral Corp., Chicago

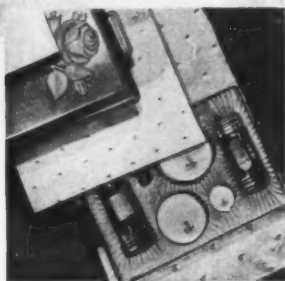
Cuts shipping costs — reduces damage in transit!

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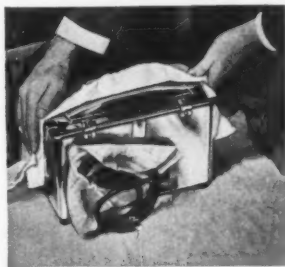
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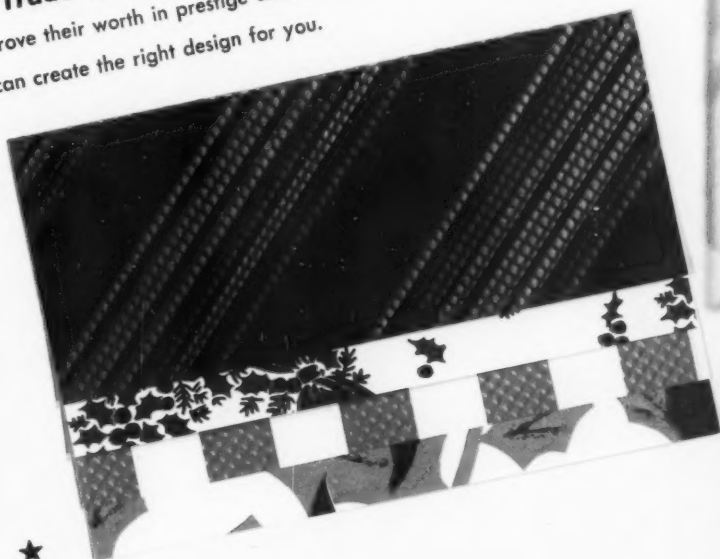
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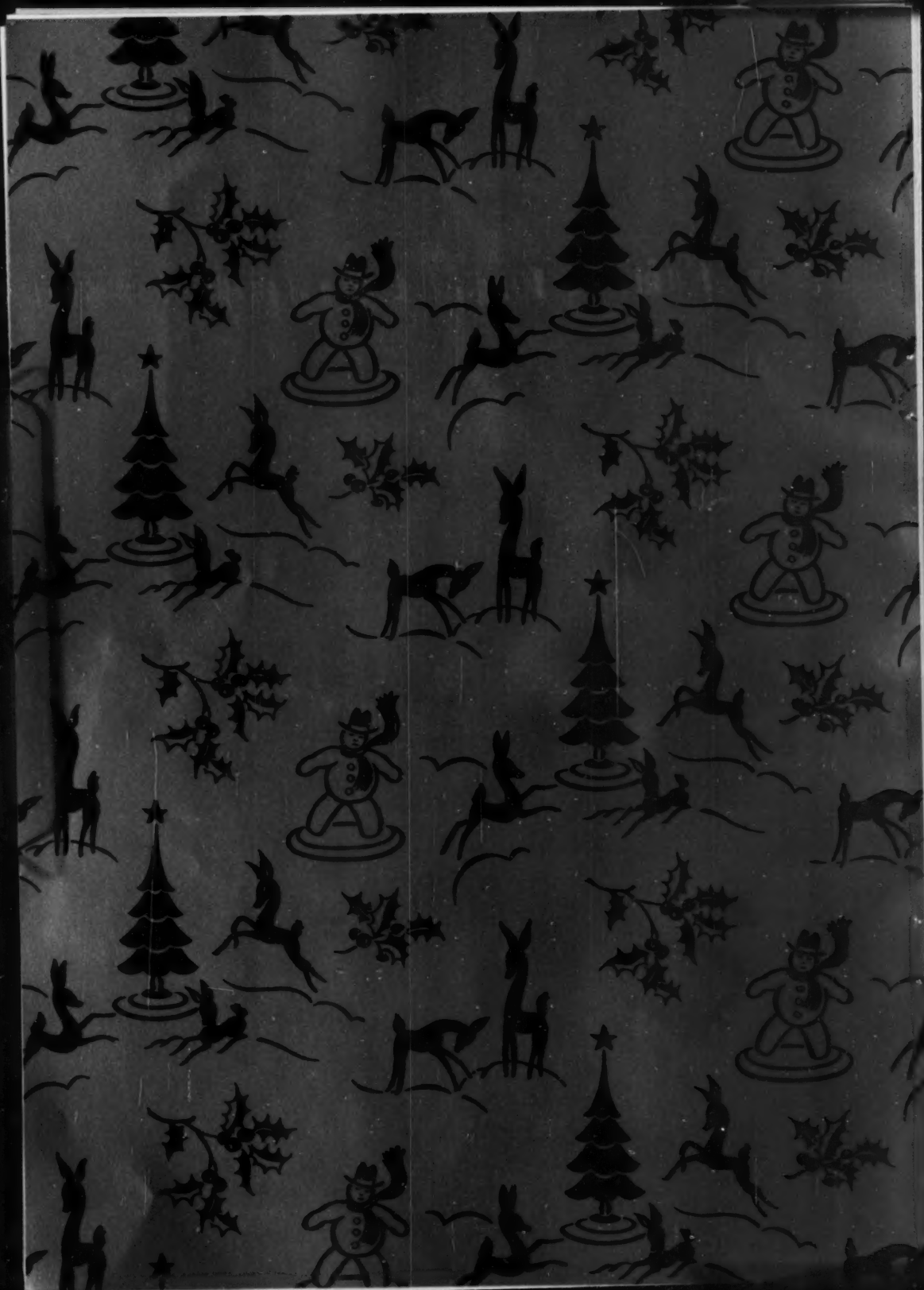
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Have you tried these proved methods for making your Cellophane supply go further?

More and more packagers are reporting substantial savings in film and dollars as a result of adopting simple economy measures. Perhaps you can profit from some of the suggestions on this page.

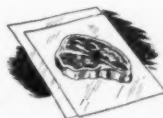
One of the most effective methods for stretching film supplies is employee education. A thought-stimulating program often brings many film-saving techniques into operation . . . helps find new

opportunities for economy. One Cellophane user got worth-while results from posting signs near wrapping machines urging operators to be conservation conscious. Bulletin-board memos, suggestion boxes, and wrapping-room conferences are also good devices for enlisting the cooperation of all personnel in an economy effort. Close supervision of packaging operations is also important.

Here are some points that can be stressed in a program of employee education.

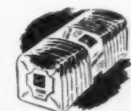
- ✓ Use all stub rolls . . . don't discard them after a production break, for instance.
- ✓ Become thoroughly familiar with your packaging machines . . . machine manufacturers can help train operators, if necessary.
- ✓ Inspect and clean machines regularly . . . check tucker-arm adjustment; be sure sealing plates function at proper temperature.
- ✓ Report machine defects immediately . . . if film is "side-slipping," have side plates installed.
- ✓ Rewrap Cellophane rolls at the end of each day.
- ✓ Make sure the film used is in good condition by following the supplier's recommendations for storage, rewrapping, and handling.

Package shapes and sizes can often be modified to save materials. For example, a baker reduced the tray size, in a package for rolls, 1" in length and $\frac{1}{4}$ " in width. Result: 12 more wraps per pound of film, and a tighter, neater package.



Sheet sizes used are often larger than necessary. One packager reports a saving of 14%—31 more wraps per pound of Cellophane—gained by switching from a 10" x 10" sheet to a 9" x 9½" sheet.

Machine cutoffs are a common source of waste. The illustration shows an unnecessary two-inch overlap. By reducing this to a one-inch overlap on a 9" x 6" x 1" package, 263 more packages can be wrapped with a 33-pound roll of Cellophane.



Roll widths can sometimes be reduced, especially if you've made even a minor change in your product or package. As a result of adopting end labels on a bread package, for example, roll width can be cut as much as one inch. If the original roll was 15" wide, the change would save one roll for every 15 used.

You, of course, are the best judge of the possibilities for economy in your packaging operation. To assist you in every way possible, your Du Pont representative will be glad to study your particular operation, and recommend specific economy steps. E. I. du Pont de Nemours & Co. (Inc.), Film Department, Wilmington 98, Delaware.

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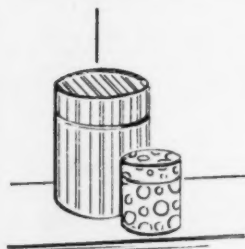
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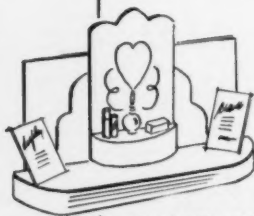
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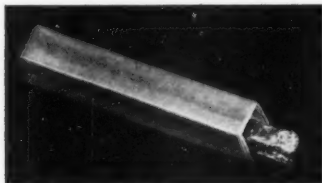
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MODERN PACKAGING

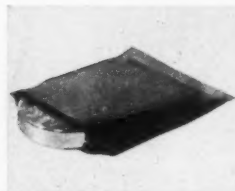
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* Plain aluminum foil is approved under "Spec. JAN-B-148 Barrier, aluminum foil as a Grade A greaseproof barrier."



FOR METHOD 1A-2 After cleaning and preserving, wrap part in proper gauge of foil. Insert in set-up box, or carton. Then wrap carton in approved Grade C self-adhering material and dip in approved wax dip coat sealing compound. Identify by standard methods and overwrap with approved material.



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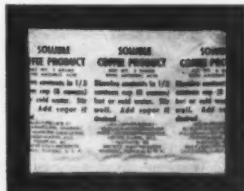
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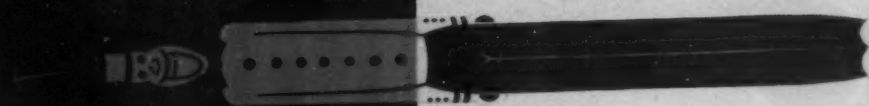
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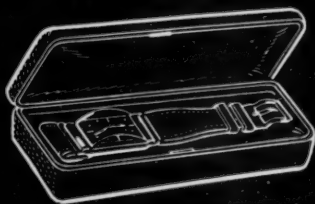
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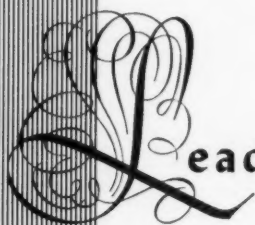
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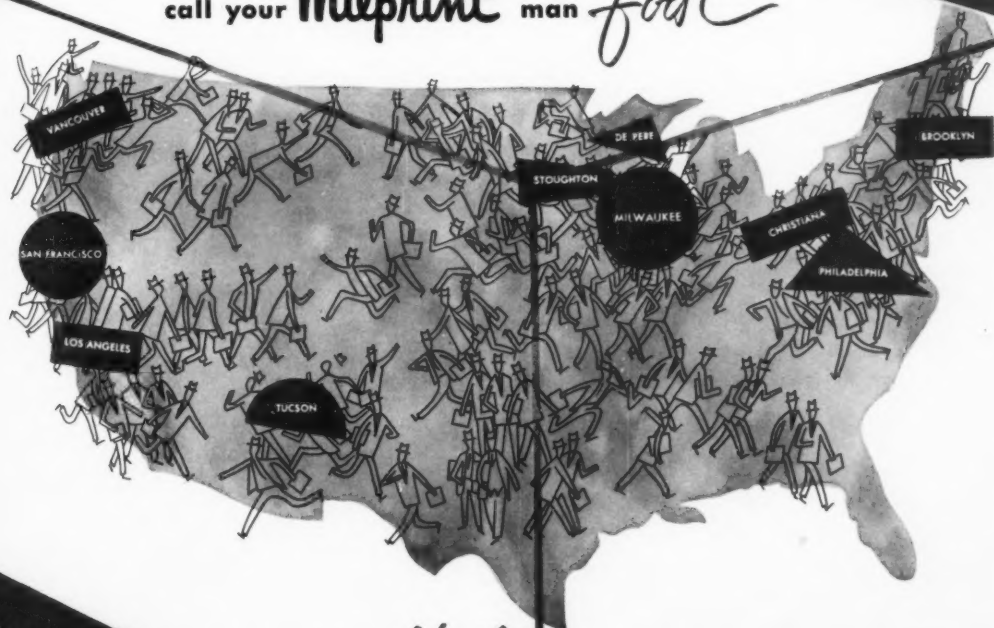


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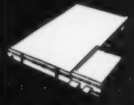
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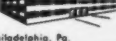
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VOLUME 24

NUMBER 7

MARCH 1951

Modern packaging



PHOTO COURTESY WINTHROP STEARNS, INC.

Developing the drug package

HOW PHARMACEUTICAL COMPANIES MEET AND SOLVE EMERGENT
NEW-PRODUCT PROBLEMS—WITH LESSONS FOR ALL PACKAGERS

Few fields of packaged products have experienced such a series of revolutionary product developments as has the drug industry in the last few decades. Discovery has followed discovery: the sulfas, the antibiotics, the antihistamines—in such rapid succession it is estimated that 55% of the drugs now in use were unknown 10 years ago.

Drug-industry sales have increased more than 1,000% since 1912 and Dr. Morris Fishbein of the American Medical Assn. has predicted that drug

manufacturing may become the largest industry in the country.

Some firms are doing two-thirds or more of their business today in products developed since 1940. One firm is reported to have introduced more than 700 new products since 1933, accounting for about 75% of current sales.

Each of these new products poses a specialized packaging problem—sometimes many, if the package is to meet the linguistic and legal requirements of export to several countries.

Some 200 products sold in foreign countries by Winthrop Products, Inc., are packed in 4,500 different forms and require 5,500 different labels and package circulars.*

Such tremendous volume and variety of packaging in the drug industry has made necessary the development of packaging organizations and procedures to a very high degree. Over the past 10 years—particularly during and since the end of the last

* See "Packaging Committee," MODERN PACKAGING, April, 1947, p. 130.

MARCH 1951

PACKAGING DEPARTMENT DUMMY

CLINICAL
PACKAGE



EVOLUTION of a commercial package for Levophed, Winthrop Stearns' new preparation for treatment of shock. Package used for clinical investigation was flat set-up box, containing five ampoules, paper labeled, and each protected by individual die-cut sleeve. As product progressed to commercial stage, it was decided sales unit should contain 10 ampoules, economically packaged in box with paperboard dividers as shown by dummy package. Finished package contains 10 ampoules with applied color labeling. The use of a wrap-around label makes the package tamperproof.

war—there has been a concentrated effort in all firms to establish methods and effect standardized practices that, in many cases, have become the envy of the entire packaging field from the standpoint of efficiency, economy, flexibility and speed of completion.

For this reason, MODERN PACKAGING has gone to a number of the larger drug firms to find out how they are

solving some of the most difficult packaging problems arising as the result of the continual marketing of new products that demand the most meticulous kind of protective packaging under competitive conditions and often to meet the most exacting time schedules.

Profits in the drug field, as elsewhere, whether for ethical or over-the-counter items, often depend on

getting to market first with the most of a new product—a condition that is even further complicated due to the strict professional and legal aspects of drug packaging.

Consider the new "wonder" drugs such as cortisone, streptomycin and aureomycin. Reports in professional journals and the public press of the seemingly miraculous cures that can be effected by such drugs quickly build up public and professional demand. The competitive rush to get on the market with such new ethical products is often just as strenuous—and just as necessary from the standpoint of successful business operation—as was the mad scramble a couple of years ago to get antihistamines packaged for over-the-counter selling.

How new drugs originate

To understand drug-packaging problems, it is necessary to trace briefly the origins of new drug products. They may develop in several ways. The new product may be the result of fundamental research—either through independent medical studies, through research in universities and medical colleges, or through developmental research by the drug firm itself. Wherever the idea for the new drug begins, it must soon be produced in quantity and packaged for clinical study. At this stage, the product of course has evolved into some form. It may be, for example, a substance in suspension that is given by injection, a substance contained in a capsule, a substance that can be made into a tablet, a substance that is the chief ingredient of an ointment.

In the beginning, the packaging consists of little more than standard



PRODUCT FORMS determine the types of packages selected. Here are two current packages for Cortone, Merck & Co.'s trademarked brand name for cortisone—one used for a suspension of the substance, the other for the more-recently produced tablets.



laboratory containers, hand labeled for identification. But as the drug moves into wider usage for clinical investigation, the packaging personnel must be ready to supply the necessary container materials and must be looking a step further toward facilities for distributing the drug in full-scale commercial units when the time comes.

It is common practice in most drug firms to establish a pilot plant for producing the first packages distributed for clinical investigation. Pilot runs, although sometimes substantial, are necessarily on a small scale in comparison with anticipated commercial production later. The modern drug-manufacturing firm must therefore be equipped with a series of separate laboratory set-ups which can be converted as required to be used as pilot plants for the manufacture and packaging of whatever drugs are being studied.

Many times these pilot operations involve very expensive apparatus, especially when packaging must be done under sterile conditions, or involves highly specialized filling or sealing procedures. Many of the operations, on the other hand, are routine, such as bottle filling and tablet counting and the same equipment and standard packaging supplies used for one product can be used for a variety of others.

Packaging staffs

To coordinate this activity and to effect efficiency and economy of operation, practically every drug firm during the past 10 years has worked toward the development of an efficient packaging department with specialized personnel, which may range from a staff of one to many hundreds of workers. Such specialization was almost non-existent 20 years ago, when packaging problems were left to the individual production units of a company, with surface-design supervision usually directed by the advertising department.

Titles of the men who head up packaging activity in drug firms differ widely in various companies, some being called directors or managers of package development, some managers of containers, other directors of package research. No matter what the title, however, the jobs are essentially similar in that the responsibility of each is to coordinate the entire program of package planning to

provide the best possible package for a new product at the most economical cost and in time for the sales department to capitalize on the peak of the market.

Many times valuable time is lost if package production does not match the sales program. Every drug-packaging man says that timing is one of the most difficult problems.

Efficient package planning must necessarily be a cooperative activity by personnel engaged in all phases of production: the various branches of research, manufacturing, purchasing, quality control, sales and advertising.



HIGHLY SPECIALIZED TECHNIQUES demand the set-up of completely new packaging lines. In a glass-enclosed sterile chamber, vials are filled with suspension of Merck Cortone. Suspension is withdrawn through automatic subdividing machine into vial in accurately measured quantities.

More and more common in the drug field is the permanent packaging committee embracing representatives of all branches of company operation related to package production. In some drug firms the packaging committee meets regularly to discuss packaging problems. In others there may be no formal organization of a committee, but the heads of the various divisions work closely together to achieve the same purpose.

Preliminary steps

With pilot-plant packaging, the drug-manufacturing firm has certain

advantages over other types of business in solving packaging problems for new products in that the packaging for clinical investigation may be studied in patterning the future commercial packaging.

During the pilot-plant operation the packaging division has an opportunity to study:

1. Chemical compatibility of the product with various packaging materials.
2. Physical standards for the package.
3. Most economical filling, closing and sealing methods.

4. Procedures for quality control.
5. Proper dosage and sales units.
6. Preparation of text matter to be submitted for approval to the Food and Drug Administration.
7. Market studies by the sales department to determine anticipated quantities of commercial packages that will be required.
8. Study of attractive sampling units for distribution to physicians.
9. Preparation of attractively designed package suitable for commercial distribution.

The form of the product, of course, and also the proper dosage, is de-

FRONT

BACK



TWO BLANK PANELS on pre-printed cartons sometimes provide space for imprinting additional essential data—as, if and when required—thereby eliminating waste which might otherwise occur if cartons did not have this available blank surface.



STANDARD CARTONS in a variety of sizes, to which separately printed labels may be affixed, permit adequate inventories which can quickly be adapted without waste. Later runs may be pre-printed. The tear-off fifth flap solves the prescription problem.

terminated by basic and clinical research. With this knowledge, the packaging department is prepared to select the most convenient package for use and many times can offer several alternate selections of materials to do the job.

Practical considerations

Protection to maintain the efficacy of the drug, of course, is the absolute essential. Nothing must be sacrificed for protection. But beyond that, the package must be economical and attractive. A fraction of a cent difference in cost per package can make thousands of dollars difference in annual packaging costs. The container manager for a company which manufactures something like 60,000,000 vials of antibiotics a year has achieved a saving of around \$60,000 a year by a simple printing change on the cartons in which the vials are packaged.

Centralized packaging supervision has also been able to effect the saving of thousands of dollars through simplification and standardization of container sizes—bottles, ampoules, cartons, etc. Close study has shown that where the various individual manufacturing divisions of a company have been requesting hundreds of sizes and different molds for bottles, a simplification program can cut the number of required sizes by 50% or more, with important resultant savings through quantity purchasing of standard sizes. Simplification will also relieve greatly the container inventory problem. There is a trend in the drug industry toward the greater use of stock glass, rather than private molds.

While dosage quantities are usually well established through clinical research, package planners in the drug field often run into serious problems concerning the desirable quantity for the sales package, whether for prescription or over-the-counter sale.

During recent years an increasing number of new drugs have first appeared as substances in suspension, packaged in glass vials and administered to the patient by injection. Often the products have been packaged in, say, 20-cc. vials containing certain basic quantities of the substance in suspension. If the average dosage should be 5 cc., then one vial will make four doses. The physician or nurse, of course, is meticulous in measuring 5 cc. into a syringe, but,

it is argued, what is the assurance that each 5 cc. withdrawn from the vial will contain precisely the same amount of the essential substance? The vial may be shaken, of course, to distribute the substance within the solution, but who can tell whether there is absolutely uniform distribution of the substance throughout the 20 cc. of liquid?

This is a strong argument for the single-dose vial or ampoule. Obviously, the single-dose glass container requires more packaging materials and vastly greater unit production, but the trend in some firms today is decidedly toward the single-dose container. Proponents of single-dose units believe that there should be no question of the additional packaging costs if the single dose assures unquestionable accuracy. Not all drugs, of course, demand such accuracy, but where they do, the user is not going to quibble over a few cents more added to the price of a drug for which he pays dollars to relieve pain or save a life.

Single-dose containers

With a single-dose container, both the doctor and the patient are assured of getting the controlled dosage that clinical study has found to be most efficacious. Progress is being made toward this improvement in ethical packaging, but slowly in view of many competitive situations in which a leader does not like to take the first step if it means a higher price for his product than that of his competitors. Current shortages of packaging materials may also slow up progress for a time.

Single-dose units of vaccines have been used efficiently for years. Even here, however, there is a problem for the packaging department. If the containers must be of extremely small capacity, such as capillary tubes, drug packagers say they must check constantly the uniformity of capacity of these tiny flame-sealed containers.

Obviously, the sales unit—whether a vial of specified content, a selected quantity of single-dose ampoules, or tablets or capsules—tends to become the amount which clinically has been found necessary to relieve the malady, except in the case of household remedies sold over the counter, such as aspirin, which can be packaged in various quantities suited to consumer preferences and buying habits.

ARRANGEMENT of the large amount of essential data in a manner that is pleasing as well as legible is always a difficult problem for the designer of medicinal packaging. Clean-cut functional treatment emphasizing product and company name solves problem for Edeco Products new family.



PHOTO COURTESY FOSTER-FORMES GLASS CO.



CONTRAST between old and new Cepacol labels illustrates trend toward effective, well-designed family groups in the drug field. Strong brand identification is becoming essential in highly competitive drug merchandising.

There is also the problem of suitable package quantities for export to foreign countries where there is wide variance in buying habits. Discussions at the drug and pharmaceutical seminar at the Packaging Institute last year indicated that there was no set procedure or practice in this respect. In general, however, products for prescription selling and exports are usually put up in decimal or metric units, whereas common practice is to package over-the-counter items in units of 12 or multiples thereof.

Proper timing

Decidedly the most exacting problem in drug packaging is the timing of label and carton printing to coincide with sales and distribution programs. Before any drug product can be introduced commercially, not only the product, but all copy for labels, cartons, direction inserts, etc., must be approved by the Federal Food and Drug Administration. In addition, such label copy must often comply with a complexity of local legal requirements in various states. For competitive reasons it is usually essential that the drug be packaged and ready for distribution immediately after this approval. The question always arises then: Should the packaging department have the printed matter for the packages prepared in advance, running the risk that all such packaging

supplies will have to be scrapped if the copy must be changed, or wait for final approval and then call on regular suppliers for a rush job immediately the go-ahead is received?

The latter procedure is more economical, of course, but is not always practical when the volume is large. Some firms take the former course, on the grounds that the risk of a certain amount of waste is preferable to the possibility of losing time in getting on the market.

Many ingenious ways have been devised, however, by some companies to avoid waste from such timing. For example, one firm leaves one side of its cartons blank for the possible addition of mandatory data. In this way some of its cartons may be partially preprinted with brand, product, company and contents information and additional mandatory data added later, imprinted either by the company's carton supplier or by an in-plant printing process as soon as FDA approval is received. In many cases this procedure has prevented heavy losses of cartons that might otherwise have been thrown away.

Other firms have adopted a standard carton in a variety of sizes. One of these is often suitable for a new product and an inventory of packages may thus be built up before the FDA approval is received. The label copy is then rushed into type after ap-

proval is received and printed on separate labels which may be applied to the already-waiting packages. This method is naturally more costly than printing all the data on the carton, as it requires an extra label plus labor and equipment for application. It also requires very careful supervision to be sure that the right labels are applied to the right packages. For later production runs, cartons may be pre-printed, thereby eliminating the cost of the applied label.

Supplier assistance

The amazing efficiency and capacity for production that has been made available to the drug industry by package suppliers can be illustrated by examples of the speed with which certain drug firms have marketed new products.

An outstanding example was the marketing of Resistab antihistamine cold tablets by Bristol-Myers in 29 days. On Oct. 20, 1949, the company decided to go ahead with the merchandising of the product, which had then just emerged from successful clinical tests. First step, of course, was approval of the formula by Federal authorities. Between Oct. 23 and 25, the company selected an advertising agency, named the product and decided upon the package—a bottle in a folding carton for the 36s and the now-familiar sealed cellophane



PHOTO COURTESY THE JOHNSON & JOHNSON CO.

PROFESSIONAL SAMPLING is one of the most important phases of marketing a new drug product. Small unit packages like these have won wide favor because of the protection afforded as well as the large surface area available on the catch-covers for brand identity and informative data.

packet in a catchbook folder for the 12s. Between Nov. 10 and 18, the supplier of the catchbook unit packages delivered the first 700,000. The printer of the catchbook folders produced 2,000,000 of them between Nov. 7 and 15. Between Oct. 28 and Nov. 15, the carton maker manufactured sufficient quantities of shipping cases, folding boxes for the bottles of 36s and display cartons for the 12s. With this teamwork, the product hit the market less than a month after the decision to begin production—an outstanding company record for a new product.

Such speed is certainly the exception rather than the rule and can usually only be accomplished by a large, long-established company with large resources.

Surface design

Although surface design of drug packages may appear routine to the average consumer, there has been a decided trend toward design improvement during the past decade to provide greater family identity and more pleasing appearance. Many firms have employed top-notch designers to produce, for example, the quickly recognizable lettering that says Lederle, Abbott, Parke-Davis

and many others. The brown and buff packages used by Squibb have been familiar for years. These distinctive yet conservative brand identifications are as important in highly competitive drug merchandising as the more flamboyant design treatment of packages in other fields—and must be, if anything, more carefully considered.

The tremendous amount of mandatory data often required on drug packages also taxes the designer's ingenuity. To get everything within given space in a manner that is clearly legible and will not look cluttered demands the best designing skill and knowledge of layout and typography. Applied color labeling (ACL) has been a great boon to the drug trade in facilitating permanent, fool-proof labeling and marking of ampoules and other types of glass containers.

There is also the problem of designing the package for prescription labeling, so that the drug manufacturer's identity may be removed and the pharmacist's applied at the time of sale.

Probably more drugs are sold by brand today than ever before, due to the well-established trademark designs on the packages, backed by the advertising of those marks, but every ethical-drug house still depends to a large extent on the prescription pharmacist and must package to his preference.

For this reason several methods have been devised to keep the product intact in its factory-sealed package, but arranged with removable labels so that the pharmacist may take off the trademarked portion and apply his own label. One form that has been used quite effectively and which can be produced economically is the carton with a fifth or loose flap bearing the drug-manufacturer's name which the retail druggist may remove when putting on his own labeling.

A much-talked-of project also affecting surface design is the possibility of adopting a standardized color identification program throughout the drug industry. Proponents would like to see all toxic drugs which are harmful if wrongly administered labeled with an unmistakable red, harmless drugs with blue, vaccines for treatment of contagious diseases perhaps with the yellow of the quarantine flag, etc. Some firms have worked

toward such standardization in their own companies, but favor an organized movement for industry-wide standardization.

Pioneering new materials

The emphasis placed on efficiency in drug packaging has benefited packaging generally. Those responsible for drug packaging must necessarily be aware of all possible materials and methods of production. As a result, the packaging personnel of the drug houses have often pioneered new materials and methods. Such alertness to new possibilities was the reason, for instance, why Sharp and Dohme was one of the first to point the way to the economical and efficient use of polyethylene friction-type closures when the company adopted them a few years ago for closing glass shells used to package Tyrozets. Similarly, the drug field was among the pioneers in using polyethylene closure liners, applied color labeling on glass and many flexible-film combinations to give protection to sealed unit packages.

Right now there is much activity in the study of alternate materials. Even though drugs are considered essential and drug products receive certain priorities, packaging departments do not want to be completely dependent on critical materials and, like others, must therefore be ready with efficient alternates and substitutes when needed.

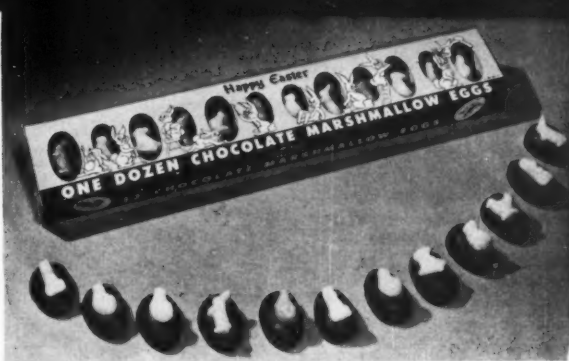
Cooperative study

The nature of the drug business is such that, while competition is keen in product sales, packaging problems tend to certain established forms which offer opportunity for cooperative study—a practice which could be adopted more generally in other industries. Much progress has been made through the Drug and Pharmaceutical Section of the Packaging Institute, covering such subjects as closure problems, quality control, glass breakage, container sizes, export shipping, etc.

The significance of the growing position of drug packaging today in relation to other packaging may be further indicated by the fact that a man who directs the packaging activities for one of the leading drug firms—Charles O. Kendall of E. R. Squibb & Sons—was elected this year as president of the entire Packaging Institute.



EGG CRATE featuring Disney's ubiquitous Donald Duck has Easter feeling, although the package has no reference to Easter, simplifying retailer's inventory problem.



GIANT SIZE is no idle boast for this Easter Egg carton which measures 17 in. long. Tried in test markets last year, it was redesigned as an item for company's 1951 Easter line.

Easter convertibles

OVERLAND CANDY CO. SOLVES THE POST-HOLIDAY MERCHANDISING PROBLEM

WITH SEASONAL PACKAGES THAT KNOW NO SEASON

In developing its 1951 line of packaged Easter specialties, the Overland Candy Co., a division of Leaf Brands, Inc., Chicago, gave special attention to the problem of the retailer and wholesaler in post-holiday merchandising of "dated" products. The company's new Easter line includes several "convertible" packages whose sales appeal is sufficiently non-seasonal to overcome the usual inventory difficulties in the event they are carried over for sale after Easter.

Featured in the new Overland line are a new Donald Duck egg crate, a cream-egg window carton containing 1/2-doz. chocolate-cream eggs, a giant-sized Easter egg carton holding 1-doz. chocolate-marshmallow eggs, and three cellophane-bag items.

The Donald Duck egg crate represents a revolutionary idea in Easter packaging in that it bears no Easter design or any reference to Easter. The

package design and the product itself establish a definite Easter motif, but with the world-famous Disney characters decorating the crate, it continues as a regular staple item throughout the year.

Overland's giant-sized Easter egg carton, successfully tested in several markets last season, is being introduced this year in a completely redesigned package measuring 17 in. long. Of sleeve-type construction, the carton is colorfully decorated with comic bunnies. The 12 butter-cream decorated eggs may be plainly seen through a dozen oval cellophane windows in the top of the package. A "Happy Easter" greeting also appears on the top panel.

Overland's new cream-egg window carton, which contains three each of the always-popular cherry-cream and coconut-cream eggs, has six die-cut windows through which the individu-

ally foil-wrapped eggs appear. The top panel of the package is designed to suggest a chicken house, with several baby chicks providing Easter atmosphere even though no direct mention of the holiday is made on the carton.

Rounding out the 1951 line is a group of three cellophane-bag items—a 1-lb. bag of jelly bird eggs, a 12-oz. bag of Easter butter-creams and a 12-oz. bag of Easter creams and jelly mix. The colorful labels on these packages are designed so that the Easter portion of the label can be torn off should the retailer have any packages carried over after the Easter holiday season.

CREDITS: Donald Duck carton, Self-Locking Carton Co., Chicago. Giant-sized Easter egg carton, United Board & Carton Corp., Syracuse, N.Y., with partition by Traver Corp., Chicago. (Cream-egg window carton and cellophane bags are made on company's own equipment.)

WINDOW CARTON features three each of popular cherry-cream and coconut eggs, each wrapped in printed foil.

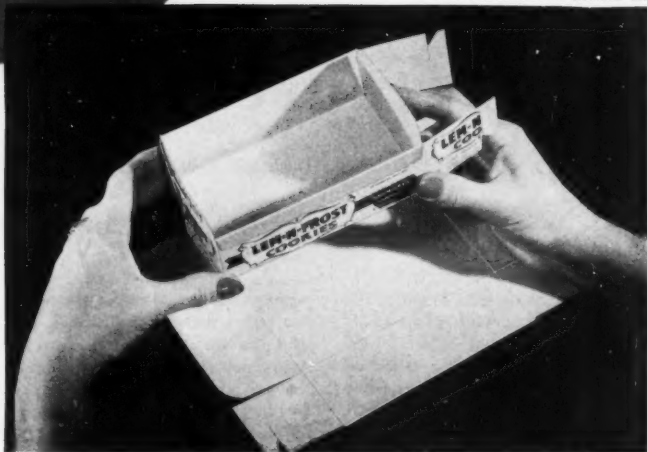


TEAR-OFF portion of header label bearing Easter greeting may be torn off on Easter Monday, so that any packages retailer has left over are not "dated."



EYE-CATCHING APPEAL of cellophane-wrapped Farm Crest cookie tray is never marred by grease spots. Twenty different varieties of cookies are packaged in the new Columbus showplace plant at the rate of three to five million cookies per day.

PHOTOS COURTESY OHIO BOXBOARD CO.



SIDES TURN OVER and ends turn up, with hook lock on outside, to insure that no raw board edge comes in contact with the product. The board, laminated with amorphous wax, is otherwise greaseproof.

Non-wicking bakery tray

TURN-OVER SIDES AND SPECIAL END LOCK ELIMINATE GREASE SPOTS

IN PACKAGE ADAPTED TO HIGH-SPEED MECHANICAL HANDLING ON COOKIE LINES

Elimination of an age-old wicking problem in baked-goods boxboard and the high degree of mechanization achieved by Farm Crest Bakeries, Inc., in the packaging of tray-packed cookies seem certain to be recognized as new milestones of progress in the baking industry.

By a simple trick of construction, the Farm Crest trays prevent the wicking of grease from the cookies through the raw edges of the tray sides—previously the vulnerable spot. In the new type of lock-tab trays which Farm Crest has introduced, a

strip along the top edge of both sides is simply turned back and glued down to the outer side, thus presenting at these edges the same greaseproof structure as elsewhere throughout the interior of the tray. The locking end tabs apparently do not require special treatment.

A special automatic machine for setting up the trays, synchronized and electronically controlled conveyor lines and an exceptionally compact layout have reduced the number of packaging operators required by approximately 50%, according to Farm

Crest officials, for what is obviously a substantial cost saving in the over-all operation of the packaging plant. Electronic controls assure an ample supply of trays within easy reach of packers at all times without manually stopping or starting the set-up machine.

The packaging line, with capacity to handle from three to five million cookies a day, is installed in the company's new \$350,000 showplace bakery in Columbus, Ohio. Other plants are in Detroit and Chicago. Farm Crest is one of the largest independ-

ent operations in the baking industry today. Their output covers the field of baked goods, but the Columbus plant is devoted to the production of cookies only. More than 20 different types of cookies are made in Columbus, including several bulk packs. A 200-ft.-long band oven is installed there, with a capacity of baking more than 6,000 lbs. of cookies per hour. At the present time, 13 different cookie cartons are used—all machine set-up—in four sizes.

Package engineering

Farm Crest's new packages and packaging line were developed in close cooperation with a leading carton supplier. Their major problem was the wicking action of the board. Farm Crest cookies are made of very rich ingredients and a cookie in contact with a raw edge of paperboard of standard carton construction soon causes an unsightly shortening stain to appear on the outside surface of the tray.

At this point the tray manufacturer took over and, through the combined efforts of its research and machine-development departments, successfully solved the problem of wicking and then devised a mechanization program that would answer Farm Crest's demand for the utmost in packaging efficiency and speed.

Attacking the problem of wicking first, a unique, single-hook tray with

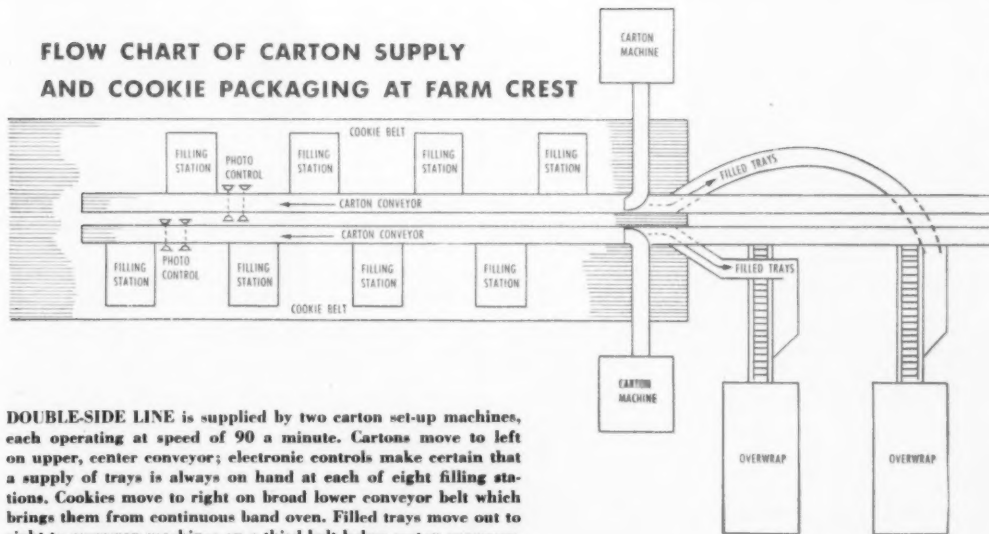
turn-over side wall was designed. The tray stock is an opaque, greaseproof sheet laminated with amorphous wax to a surface of white patent-coated newsboard. The finished caliper of the lamination is 0.019 in. This structure has previously been successful in preventing direct grease penetration, but there has been no means of inhibiting wicking from the edge down through the outside layer of paperboard. The turn-over edge feature, which appears to be the answer, has been made the basis of a patent application.

There still remained the question of raw edges of the locking end tabs, which in most trays of this type would come in contact with the product. This hazard was eliminated, as shown in the close-up illustration of the set-up action, by having a continuous tongue of the board folding up from the bottom at each end of the tray, with the hook-end locking tabs coming to the outside of this protective tongue. Thus no raw edges can come in contact with grease-bearing portions of the product. This construc-

TRAYS FORMED 90 a minute on specially adapted machine (foreground), are fed to packing stations on conveyor lines with electronic controls which assure a constant supply. Machine starts and stops automatically.



FLOW CHART OF CARTON SUPPLY AND COOKIE PACKAGING AT FARM CREST



DOUBLE-SIDE LINE is supplied by two carton set-up machines, each operating at speed of 90 a minute. Cartons move to left on upper, center conveyor; electronic controls make certain that a supply of trays is always on hand at each of eight filling stations. Cookies move to right on broad lower conveyor belt which brings them from continuous band oven. Filled trays move out to right to overwrap machines on a third belt below carton conveyor.



HAND PACKING is very fast, with operators on both sides of the line being constantly supplied with cookies and trays. Filled trays are carried away on the center belt to inspection and cellophane overwrapping stations.

tion, it is said, also makes for a fast machine set-up. And it is accommodated by an economical blank.

The next step came when engineers made a study of Farm Crest's plant, drawing sketches of the packaging line, determining the floor space available and the speed at which the cookies emerged from the



NO WASTE MOTIONS. The empty trays fall into position for filling, get one row of cookies, a divider, a second row of cookies and are then simply pushed to the discharge belt at the left.

band oven. No conventional or standard carton-forming machine met the specifications desired. Therefore, the engineers, working with a standard tray-lock machine as a base, designed the special forming equipment, vacuum pumps and electronic controls that would give Farm Crest a speedy, yet functional, means of setting up die-cut tray blanks and conveying them directly to the packaging line.

Formed trays are delivered automatically to packing stations which are in close proximity to a conveyor belt bringing cookies from the cooler. The packer merely picks cookies from this belt, fills the tray, pushes it to a take-away belt and immediately a new tray drops through a station chute into place for filling. Unfilled trays or filled packages are not handled by the packer.

Should trays be presented for filling faster than they can be filled, a set of electronic beams is broken and tray delivery is stopped immediately. The tray conveyor belt continues to move under the trays so the instant beams are re-opened, delivery to packing stations starts again.

Trays travel at a tilt on the conveyor belt so that they will automatically feed by gravity into the chutes that supply the trays in position for packing. The packers pick up cookies from a conveyor belt that brings cookies from the oven and insert them two rows to the tray with a divider between rows. The filled trays are transferred by hand onto a conveyor that takes them to inspection and overwrapping on a standard-type cellophane-wrapping and heat-sealing machine.

Many popular types of cookies are made by Farm Crest, including fig bars, peach-apricot bars, black-walnut cookies and chocolate-chip cookies. Individually designed trays, printed in attractive colors and designs that help identify the type of cookie, are used. Heads in the tray-forming machine can be changed, it is reported, in a matter of only six minutes.

Promotion

Farm Crest announced its new plant and cookie operations to the public with a 12-page supplement in a Sunday edition of a Columbus newspaper. Open house was held and an estimated 12,000 persons visited the plant to see cookies being made and to eat free cookies and drink soft drinks. A program of the festivities

was televised right from the plant.

A television set, photo-flash cameras, toasters, waffle irons, electric mixers and other prizes were given to holders of lucky tickets.

Designed to promote super cleanliness and high efficiency, the plant has an interior finish of ceramic tile. Floors are hardwood or tile, depending on usage. The plant is laid out to expedite a smooth, unbroken flow of incoming supplies to finished product. Drums and barrels of perishables are moved from a modern loading dock by elevators. Bags are moved by conveyors. Storage is on the upper floors of the three-story building so that minimum handling is required.

Fluorescent lighting is used throughout the plant and major working areas are laid out to take maximum advantage of natural light.

All moving supplies are handled by automatic conveyor. Mixing is done with automatic equipment and baking is in an automatically controlled oven.

CREDITS: Special tray design and special engineering of packaging line, Ohio Box-board Co., Rittman, Ohio. Basic tray set-up machine, Package Machinery Co., East Longmeadow, Mass. Cellophane overwrapping machine, Battle Creek Bread Wrapping Machine Co., Battle Creek, Mich. Packaging conveyor system built and installed by Ebbert Engineering Co., Birmingham, Mich. Cookie conveyor system, Baker-Perkins Co., Saginaw, Mich.



INSPECTION of each package is made when the trays are transferred from the filling line to the conveyor that carries the filled trays through cellophane overwrapping and heat-sealing unit.

Hanging packages

THAT LITTLE IDENTIFICATION OR INSTRUCTION TAG,

OFTEN THE ONLY SELLING TOOL AT POINT OF SALE,

DESERVES THE BEST POSSIBLE PLANNING

A great many items of merchandise, of necessity, do not come packaged—in the real sense—at the retail level. In such categories are the majority of clothing items, yard goods, furniture and home furnishings, tools and many others. In times of package-material shortages, even more merchandise is sold without a package.

In all these cases, labels, seals and tags—sometimes referred to as “hanging packages”—are the only selling tools which remain attached to merchandise from manufacturer, to retail outlet, right into the home.

With growing brand consciousness built up through national advertising and because of the many new synthetic and plastic materials, these tags have become even more important in merchandising, carrying the whole burden of identification, description, instruction and promotion.

The shopper who buys a garment of nylon wants complete information on how to wash and care for it. The purchaser of an automobile accessory or a household gadget wants to know how to install and how to care for it.

The trend to self service and the decrease in personal sales assistance also demands greater informative labeling. Where unpackaged items hang on racks, stand on the selling floor or lie on the counter or shelf, the well-planned tag or label may be one of the determining factors in closing the

sale. Through a familiar trademark on the tag the shopper may identify the product with the advertising he has seen. He may find some quality appeal noted in the selling copy on the label. Or a description of the ease with which an item can be washed may determine the sale.

Manufacturers who formerly made little use of such tags except for identity are making sure the sell story is told effectively and forcefully in the limited space of the tag or label.

Several examples are illustrated with this article, showing how such labeling can be effectively handled by an experienced designer.

The Sanforized Division of Cluett-Peabody, Inc., has done and is doing an outstanding job of capitalizing on the wide acceptance of Sanforized and Sanforlan resulting from extensive advertising of its processes to prevent garments from shrinking out of fit. Currently three types of labels are being used—a sew-in label, a hang-tag with cord and a booklet tag. Each features the trademarked name—“Sanforized” on garments made of washable cottons and “Sanforlan” on washable woolsens. Reverse sides tell advantages, give washing instructions.

The Roberk Co. has prepared an elaborate die-cut, fold-on tag which identifies quickly the company’s “Deluxe Exterior Rear View” mirrors. The chrome-plated feature is emphasized

on the front panel of the tag. Inside are diagrams keyed to instructions showing how to mount the mirrors.

Crompton-Richard Corp. is using a very effective booklet tag on yardage. The tag, attached to the bolt of cloth at the mill, contains a number of perforated pages giving washing and ironing instructions. As lengths of the cloth are sold at retail, the sales person tears out a page from the booklet tag and wraps it with each purchase, so that every purchaser receives complete washing instructions. Another feature of this booklet tag is the inventory control provided on the back where the sales person may record remaining yardage on the bolt.

CREDITS: Tag and label designs, George Reiner, New York. Roberk and Crompton-Richmond tags, Dennison Mfg. Co., Framingham, Mass. Sanforlan booklet tag, Berger & Gorin, Inc., New York. Sanforized hang tag, Normandie Press, Inc., New York. Sanforized sew-in label, Rose Patch & Label Co., Grand Rapids.

PERFORATED PAGES giving washing instructions in this booklet tag, attached to bolt of cloth, may be torn out individually and wrapped up with each purchase of a length of cloth. Back of tag may be used for keeping record of the yardage left on the bolt.

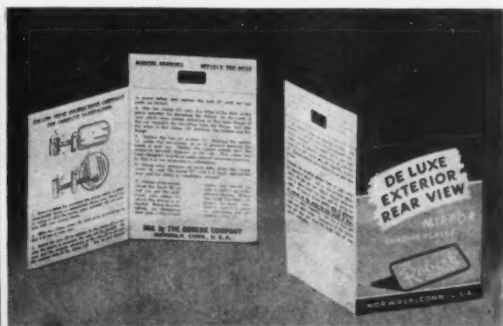


PHOTOS COURTESY GEORGE REINER.

THREE WAYS to remind shoppers quickly of processes to prevent shrinking: sew-in label, hand tag, booklet tag.



INSTALLATION INSTRUCTIONS are essential for many gadgets and accessories, such as Roberk rear-view mirror.



Packaging's Hall of Fame



TWENTY-FIFTH OF A SERIES

BAND-AID

ADHESIVE BANDAGES

Today the United States on a nation-wide scale is first-aid conscious. Prompt attention to even the slightest cut or scratch is a practice as well ingrained as stopping for a red traffic light. Countless serious infections and their attendant miseries of pain, prolonged treatment and medical bills are avoided as a result of speedy treatment with ready-to-use sterile bandages.

In no small part, this national habit can be traced to what is probably the best known and most convenient of all first-aid products—the familiar white can of sterilized Band-Aid adhesive bandages with the tiny red tear strings and the fold-back crinoline flaps that permit applications of

the bandage without fingers touching either the wound or the gauze pad that covers the wound.

According to a recent home inventory of medicine cabinets, 94% of the homes visited used adhesive bandages. More Band-Aid bandages appeared in this home check-up than all other brands combined. Sales of all brands in 1949 totaled \$20 million, Johnson & Johnson's Band-Aid brand claiming by far the major share of consumer preference in this market.

The reasons for this product acceptance are not hard to find. J & J made product history in 1920 when it first introduced adhesive bandages. Since that time there has been a steady progression of product and packaging

improvements, many of them pioneering achievements in the surgical-dressing field.

Band-Aid bandages, for example, in 1924 were first to use the flat hinged-top metal can for easy opening and to protect the contents from dirt and wet hands. In 1924 J & J took the lead in developing automatic machinery for producing adhesive bandages. In 1930 J & J brought out the individually wrapped, ready-to-use Band-Aid bandage. In 1934 an upright metal can of the same general style as the handy container used today was adopted.

In 1939, after years of development, J & J perfected its technique of sterilizing bandages in the package. And in 1940 the famous red tear string for the individual bandage wrapper, a patented J & J feature, came on the market.

During the war J & J packaging engineers proved remarkably ingenious in devising a substitute for the metal can, their hinged set-up box for these bandages being one of the most admired of all paper substitutes.

For the reasons behind J & J's continued leadership in a field that soon became hotly competitive, one must look beyond the product and package to advertising and promotion.

J & J's advertising and promotion are noted not only for the size of the program, but also for impact and consistency. Much has been done to promote J & J's familiar Red Cross brand name and trade symbol as well as the meaningful slogan "The most trusted name in surgical dressings." The campaign behind this slogan goes back to the days when Gen. Robert W. Johnson, now the company's board chairman, was striving to awaken the public to the need for

JUVENILE APPEAL has always been strong in Johnson & Johnson's promotion. Latest stunt has six real Band-Aid junior bandages glued inside the pages of an amusing Golden Book about "Doctor Dan," giving young readers a practical story-lesson in first aid. The initial press run of the book is 1,600,000—largest in Golden Book history.



NOMINATED FOR PACKAGING'S HALL OF FAME BECAUSE:

- Through packaging that has made them safe and easy to use, they have educated the public to aseptic first-aid practices.
- Effective promotion and merchandising have been achieved without loss of ethical standards.
- The handy can and tear-string wrapper comprise a package famous among consumers of all ages.
- Meticulous care and continuous research in packaging back up the claim: "The most trusted name in surgical dressings."

sterilization. It is hard to realize today, but it was only a few years back that mothers were accustomed to binding up their children's cuts and scratches with rags torn from old petticoats, which may have been clean but were far from surgically sterile. J & J advertisements tellingly featured the caption "Betrayed," while illustration and copy drove home the lesson that a mother could actually "betray" her children by using non-sterile bandages.

The juvenile theme has long been a strong one in J & J advertising and certainly no other subject could more naturally suggest the confidence and trust on which J & J strives to build and continue its reputation. MODERN PACKAGING'S cover illustration, reproduced from an original painting done for J & J by John Falter, is an excellent example of the way in which the company has put over its theme with human interest and good taste.

In recent years a series of juvenile first-aid scenes painted by Gladys Rockmore Davis has made J & J's advertising outstandingly popular as well as effective. Copy states simply, "Mommy always says you're safe when you use Johnson & Johnson."

How J & J began

More than coincidence is the fact that the practice and appreciation of prompt first-aid in this country stems, roughly, from 1887, the year three Johnson brothers, Robert, James and Edward, incorporated their New Brunswick, N. J., surgical-dressings firm. In their field the brothers were practical pioneers, applying the sterilization theories of the great English surgeon, Joseph Lister, and the French scientist, Louis Pasteur. At that time, ridicule for these theories

about infection was more common than appreciation. J & J performed a highly important service by educating the public to the practicability of scientifically prepared surgical dressings which they made available for the first time in packaged form.

In the second year of its existence the firm developed and added sterile surgical sutures to the line and devised methods for making and packaging absorbent cotton, moist dressings and sterile ligatures. Three years later a complete first-aid system of emergency dressing was offered to the public and played an important part in first-aid movements throughout the world.

In 1900 the company built, in New



CONVENIENCE is keynote of appeal that has made the Band-Aid trademark a household word. Packaging made possible the whole idea of sterile, ready-to-apply, instantly accessible bandages.



TODAY'S PACKAGES are lithographed upright cans with self-hinged lids and turned-over edges for maximum protection of the product and ease of use. Recent changes in the color scheme and typography of package give better legibility and identity. Color are red, gray and black on white.

Historic stages in development



1920

EARLIEST PACKAGE was this folding paper-board carton with paste-on label. This 1920 package contained a single large bandage which had to be cut to size by the consumer.



1924

READY-CUT BANDAGES appeared in slide-base set-up box with sleeve. Package also contained strips to be cut as needed.



1925

GREATER PROTECTION, always in the forefront of J & J thinking, was achieved by lithographed flat metal container with a hinged lid.

Brunswick, N. J., the first factory in the world to convert raw cotton into surgical dressings through scientific methods.

Today J & J embraces 17 domestic corporations employing about 11,000 persons. Total sales of all products in 1949 amounted to \$134,879,860. In addition, J & J owns 23 companies manufacturing various J & J products in foreign countries. These branch operations employ 3,800 persons.

The idea for manufacturing adhesive bandages appears to have been a joint discovery. The story is that one of the company's employees, recently married, was impressed in 1920 with the need for ready-made bandages that his bride could apply to the rather frequent cuts she experienced in taking over her new duties in the kitchen. The employee brought his idea to General Johnson and the General recalled that he had seen a product in Europe that was somewhat crude but similar to the type of bandage that the new bridegroom was suggesting.

The trade name "Band-Aid" was suggested in 1920 by W. T. Kenyon, superintendent of the plaster mill producing all adhesive products.

There is today a tendency to take for granted modern products and the packaging that makes them available to mass markets through thousands of

retail outlets and at prices everyone can afford. However, in 1920 the dressing of a bleeding cut finger, if it were to be bandaged at all, was actually a two-person job. The general practice was to tear off a strip of white cloth from mother's rag-bag; tear or cut a portion of the strip down the middle to provide two ends for tying; then laboriously wrap the bandage around the injured finger and tie a knot.

Development of product

When adhesive bandages were first produced, they were made entirely by hand. An operator placed a long strip of adhesive tape on a table. A folded piece of gauze was centered on the strip and over that the facing cloth was placed. The bandage was cut into strips 2½ by 18 in. and single strips were folded into a folding carton that had a paste-on label, printed blue and red on white with a yellow border. The single large strip was designed for both professional and home use. The user had to cut the bandage to fit.

In 1924 machinery was devised to make the bandages, but packaging was still done by hand. Two pieces of crinoline facing that overlapped and could be folded back when applying the bandage were used on the bandage to facilitate removal of the

facing. Previously, the facing, which had to be picked off, was hard to remove and often the bandage was distorted. The bandages were no longer a one-piece affair. Instead there were six strips ¾-in. wide, ready for application, and three pieces 3½-in. long to be cut in strips as needed. The container was a slide base, set-up box with sleeve. There was a stronger play of the Band-Aid brand name on the label.

In 1925 a flat lithographed metal box with hinged lid was adopted to afford better protection and greater convenience in use.

The history of package development on this product is one of ceaseless search for greater convenience in use and better protection of sterility—the two keystones of the whole product idea.

By 1930 Band-Aid bandages were individually wrapped in glassine, but the ends of the wrapper had to be left open. In 1934 the use of the flat metal container was discontinued and an upright metal container with sliding lid was adopted. Two years later a means was found for folding over and sealing ends of the wrap and a hinged top replaced the sliding lid on the can. From that time on, hinged lids have been a *must* feature on these containers because the hinged lid is handier and also because a lost

of the handy Band-Aid container



1928

STRONGER NAME in diagonal band reflected the growing importance and public acceptance which had been achieved by the ready-to-use adhesive bandage as an essential requirement for first aid.



1937

UPRIGHT CAN with hinged lid helped avoid slipping of contents. An earlier upright can in 1934 had a sliding lid.



1944

WARTIME SHIFT to paperboard brought this handy set-up box. The three-quarter telescoping lid was hinged to the box by cover paper.

lid means lost product protection.

The original metal container and subsequent improvements were developed in cooperation with one of the can companies.

Management policy

Regard for good packaging starts at the top in the J & J organization. General Johnson (who was commissioned a brigadier general while heading the Smaller War Plants Corp. during World War II) has long been an articulate advocate of the importance of packaging in modern merchandising. It was he who insisted that packaging lines in J & J plants wherever possible should be designed as showplaces for visitors, thus making these operations serve additional duty as an instrument of better public relations.

One of the General's plant-wide talks to employees was devoted exclusively to the function of the package. "Some workers," he said, "don't quite realize how many jobs a package must perform. They may seal cartons tightly, but not quite evenly, forgetting that an uneven package cannot be neatly packed with others. Or perhaps they put labels on at an angle, forgetting that this is a sign of carelessness. On our products these things matter. The consumer who sees signs of carelessness on a pack-



1946

IMPROVED LABELING with much stronger printing of words "adhesive bandages" was employed on this version of paperboard box. Structure was the same as in 1944. Package retained many advantages of metal box—it was handy to use and surface resisted soil.



1947

RETURN TO METAL CAN with the same snap lid as used prewar marked J & J's preparation for a surge forward in the postwar market. Design continuity of wartime package was retained, with the white background suggesting its surgical cleanliness.

age is bound to wonder whether workers have been careless with the product inside."

So J & J has well-defined packaging policies and efforts are made to insure that these policies permeate the entire organization. As a result, there has been a continuous flow of pack-

aging improvements at J & J—some of them big, many of them very small.

In 1939 advances in techniques for wrapping and folding over the ends of wraps on individual Band-Aid bandages made actual product sterilization in a sealed package practical. Recognizing the importance of this ad-



SEARCH for easy-opening bandage wrap that would still preserve sterility of contents progressed through these stages chronologically: (1) machine-closed wrap, dated 1926; (2) machine wrap with portion unsealed for opening; (3) curved cut-out on sealed edge; (4) red tab for end opening; (5) loose paper margin along entire sealed edge; (6) today's famous tear-string package with its guaranteed sterility.

vance, the General threw the entire weight of his organization into a drive to make sterilization a universal practice. In so doing, he was years ahead of the law that today assures every user that ready-made adhesive bandages are sterile in their wraps.

But the sealed sterile package was hard to open. Extra handling in opening endangered the sterility of the pad. One of J & J's greatest packaging achievements came in 1940 when a means was devised for sealing a red tear string (actually a thread) within each glassine package so that tearing off one end and pulling the thread would slit the wrap neatly down the side.

During World War II J & J had to abandon the metal container for its bandages temporarily because of the metal shortage. Many styles and kinds of paperboard cartons were

available. It is characteristic of J & J that standards developed through the years were not lowered in seeking a substitute. A sturdy set-up box—actually a box within a box—with a self-hinged, fold-over, telescoping top section was produced for them by one of the country's oldest manufacturers of set-up specialties. Careful attention was given to coated stock for the surface so that the surface would match the whiteness of the metal can and at the same time resist soiling, stains and moisture. This package, so similar in function and size to the metal container it replaced, enabled J & J to keep its packaging line moving with scarcely a modification in packaging procedures. The public readily accepted the change in package. If consumers thought much about the change at all, it was probably to compliment J & J on the ingenuity of the package that retained so many advantages.

Package-wise, J & J gained rather than lost by the way they met the emergency. Sales to the home market mounted steadily during the war years. Certainly, there is an important packaging lesson here for manufacturers who again face shortages, substitutions and consequent important problems in design and packaging methods.

Following the war J & J returned as soon as possible (actually it was 1947 before metal was available for this use) to the upright metal container with the hinged snap lid. In 1950 slight changes were made in layout and typography to give better legibility and identification. "Band-Aid" is now printed in red on the top as well as on the sides. Edges of the lid are rolled over to facilitate opening and safe handling. The lid is now self-hinged, eliminating the pin

formerly required. Directions are printed on the back panel of the container. Printing on the individual wrappers is now parallel to the length of the bandage to provide an easier-to-read printed message; a line drawing illustrates how to open the bandage. The printed message on the wrapper is of random design, assuring a complete message on each regardless of where the wrapper is cut.

J & J now packages 18 types and sizes of strip bandages including plain pad, Merchurochrome pad, tyro-thrin pad and elastic flesh-colored bandages. In addition, under the Band-Aid trade name there are cohesive gauze, corn pads, bunion pads, moleskin adhesive and the new patch & spot dressings. Plain pads, as well as some of the other styles, are put up in metal containers in two sizes: 36s, including a strip of 12 juniors; and 73s in assorted sizes.

For hospital use J & J packs Band-Aid bandages in paperboard cartons holding 100 bandages in two sizes and 300 junior-size strips. The 100s carton has a perforation in the back panel so that the container can be held on the wall by a nail. A perforated corner at the bottom of the box tears off and wrapped bandages are dispensed individually as required. The user simply slides one bandage out and gravity feeds the next bandage into place ready to be removed.

Package requirements

Band-Aid adhesive bandages are manufactured and automatically wrapped at very high speeds. Because of this, and the sterilizing which it undergoes, the glassine used in wrapping these bandages must have many unusual characteristics.

The paper must be soft so that it may readily be folded into a double



NEWEST member of Band-Aid family is the patch and spot assortment of dressings, each individually wrapped and sterilized in glassine envelope and packed in a sleeve-type set-up paperboard box.

end fold. Once this end fold has been made, the paper should not tend to spring back, as this would make the packaging operation more difficult and give a poor appearance to the finished product.

The paper must thoroughly absorb glue so that the longitudinal seams on each individual wrapper may be adequately sealed. The glue must withstand sterilizing temperatures.

The wrapper paper must be capable of maintaining the sterility of the package contents by preventing the transmission of bacteria.

In the case of a sterilized product, color of glassine is important. The paper must have a white color after sterilization in high-temperature steam. Few papers can meet this requirement. A well-bleached, high-quality pulp is necessary. If pulping and bleaching are not properly carried out, the paper will yellow badly after sterilization.

String used to open the wrapper must be thin to avoid bulk, but strong and pliant so it will not crush during the wrapping operation; otherwise the ends will become frayed and detract from neat appearance.

The forming and wrapping of individual Band-Aid bandages is a completely automatic, high-speed operation performed on machinery that is largely of J & J's own special design—for which reason the machinery cannot be closely described or illustrated. Tape, gauze, crinoline, paper and string are fed from rolls into the continuous operation of forming the vented bandages, inserting tear string, wrapping the bandage, cutting to length and folding over the ends of each wrapper. The individually wrapped bandages are collected in trays and transferred to the steam sterilizer.

The empty metal containers are lifted in layers by a magnetized bar and placed on a conveyor. Cans travel in groups of three on the packaging lines, where girl operators pack collated and pre-counted units of bandages into the containers, which are then closed mechanically. The cans are packed 12 to a packer, six packers in a B-flute corrugated shipping carton. Cartons are sealed and are then moved on pallets by fork truck and over-the-road truck to the new J & J shipping center at Metuchen, N. J.*

All packaging materials are statisti-

cally sampled on receipt, using Dodge-Romig tables. There is a close check on quality of paper and printing. Colors must match standard color chips with a high degree of exactitude. Tests are conducted for folding characteristics; moisture content, which affects machine production; ash content, which influences pigmentation and opacity; weakness in the paper caused by imprint of the type faces. Printing inks must be able to undergo exposure to live steam without running. Many samples are checked throughout the day. There is roving inspection at the machines. A final sampling and inspection is made at the shipping center.

Although we have chosen in this story to deal with one of the most famous representatives of the Johnson & Johnson line, the same care in packaging is applied to other products of J & J and its associated companies, including—in the consumer field—cotton, cotton balls, sterile gauze pads, adhesive tape, baby products, Chix and Chux diapers, Meds tampons, Modess sanitary napkins, Coets cotton squares, Yes tissues, Tek-Hughes brushes, and tooth brushes, Texcel cellophane tape, Bondex mending tape, Permacel industrial tape and Lumite plastic screen fabrics.

Advertising and promotion

From 1920 to 1936 J & J carried on an extensive sampling campaign for Band-Aid adhesive bandages among stores, doctors, schools, clinics and home users. Salesmen were con-

COUNTER merchandiser, one of several types of fixtures that J & J makes available to druggists, plays an important part in stimulating impulse sales. Used in many store locations, merchandisers have increased sales by as much as 300 to 500%.



DISPENSER PACK for professional use has perforation for hanging carton on nail. Tear-off corner at bottom permits gravity feed of the individual bandages.

stantly handing out samples and there was some consumer advertising.

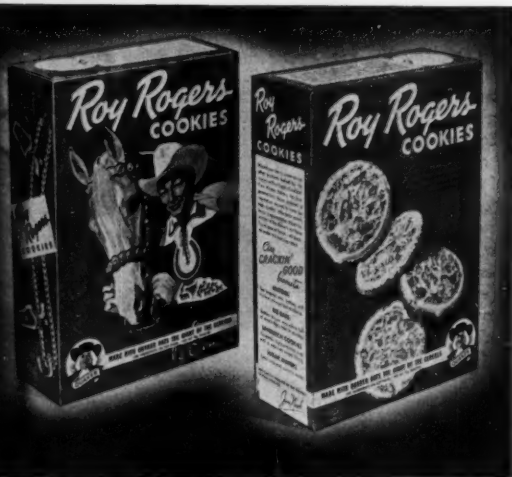
In 1936 full-scale advertising support was put to work in the promotion of the product. Throughout its campaigns, J & J has sought to expand the market and has sold use just as strongly as it has sold product. The basic themes of quality and trust have always been stressed.

J & J carries on an over-all cam-
(This article continued on page 156)



* See "Automatic Warehouse," MODERN PACKAGING, Dec., 1949, p. 110.

Three-way trademark promotion all on one package



The popular practice of promoting related products and trademarks poses new problems for the package designer. An excellent example is the new package for Roy Rogers Oatmeal Cookies which features a three-way tie-in between Carr Consolidated Biscuit Co., the cowboy star, Roy Rogers, and Quaker Oats from which the cookies are made. One face of the five-color-printed carton is devoted to Rogers and his horse, Trigger, providing appeal for the youngsters. Prominent display of the Quaker trademark with the streamer, "Made with Quaker Oats, the giant of cereals," identifies the cookies with a name that mothers quickly recognize. The biscuit company also believed it an advantage to feature the designer's name right on the package, since the same one who created the modernized Quaker mark was responsible for the Roy Rogers Oatmeal Cookie package.

CREDITS: Design, Jim Nash, New York. Carton, Empire Box Corp., Garfield, N. J.

Eaton's Highland stationery restyled

The decision to redesign boxes for Eaton's Highland writing papers, a steady-selling line for over 50 years, was based on continuing studies of changing buying habits. Consumers are more fashion conscious today due to improved styling and wider selections of boxed stationery. They give more writing papers

as gifts and buy more packaged items for personal use. Boxes for the four famous Eaton's Highland papers—Linen, Vellum, Air Mail and Deckle—have, therefore, been restyled to provide more appeal for gift and personal purchases. Boxes are equally appropriate for men and women. All designs retain a family feeling, but each is easily distinguishable, facilitating visual identity.

All of the boxes are made at Eaton's own plant.

OLD



NEW

HISTORIES

Colorful cut-outs zoom child-suspender sales

Chain-store sales of children's suspenders manufactured by Sturn & Scheinberg are reported to have zoomed with the introduction of these redesigned card packages, die cut and printed to resemble a cowboy and a cadet, capitalizing on the popularity of military and Western themes. The cost of printing the new cards is approximately the same as that for the old (left), which was completely lacking in child appeal or anything to give distinction in counter arrangements. The new card encourages the retailer to display the product prominently and thus stimulate impulse purchases. Card for the De Luxe Cowboy Braces pictures the cowboy, complete with sombrero, kerchief and holster for his gun. That for the De Luxe Cadet Braces shows the military-school cadet with the suspenders crossed over his jacket. Both cards, printed in three colors, become toy cut-outs when the merchandise is removed.

CREDIT: Design, Norbert Jay, New York.



Rejuvenating a 40-yr.-old item

El Vampiro, a bug powder marketed in the same package since 1912, has undergone its first major change in package design. The manufacturer, Allaire-Woodward, Inc., recently became an operating division of I. P. Callison & Sons and the new management has pepped up the package and changed the product formula slightly preparatory to its new plan for advertising and promotion. The package change is essentially one of label design. Shape and size of the package remain the same, since this is determined mainly by the bellows action required for dusting the powder. Use of a bellows box is merchandised with the wording, "Magic bellows box with the jet blast." The new label keeps the trade name in reverse plate and continues use of yellow stock with dark blue ink for continuity of identity. Added is the third color—red, the *Good House-keeping* seal and its 25-cent price.

CREDIT: Box, W. C. Ritchie & Co., Chicago.



CONCENTRATED MILK



THREE TIMES AS MUCH milk in same space is feature of concentrated fresh milk being test marketed by National Dairy Corporation in Wilmington, Del. Product uses conventional paper package—but the 1-qt. size provides three quarts of milk when reconstituted with water and a 1/3-qt. size makes a quart. Container sizes are experimental at present.

The sales potentials and packaging requirements of concentrated milk in liquid or frozen form are now being investigated by several major dairy organizations. The added consumer convenience of such products offers tremendous marketing possibilities and the potential savings in space, weight and packaging materials are of significant proportions.

Concentrated milk, liquid or frozen, is not to be confused with whole milk powder or non-fat dry milk solids, which have been marketed for some time in milk-deficient areas and have also undergone considerable marketing development since World War II. Concentrated milk is processed to remove most of the water content. It is reconstituted simply by adding a specified amount of cold water. The reconstituted product is said to equal the original in fresh taste, flavor and nutritive value.

The new liquid concentrate, mar-

keted in the same way as regular milk, uses conventional-type containers. The frozen concentrate is packaged in metal cans and is sold from low-temperature frozen-food cabinets. It has interesting potentials for specialty products such as chocolate-milk drink—especially in view of the sensational public acceptance of frozen orange juice concentrate and the rocketing of this product to top volume among all types of frozen foods in record time.

Liquid product

National Dairy Products Corporation, through one of its operating divisions, The Clover Dairy Company, Wilmington, Del., has introduced "Sealtest" Concentrated Grade A Milk. This product has been reduced to one-third of its usual volume by removing most of the water. When mixed with two parts of cold city water, it is equal to fresh, pasteur-

ized, homogenized vitamin-D milk, with all nutritional elements intact, according to the dairy. The concentrate is not powdered or frozen, but has a consistency similar to thick cream and is handled and cared for in the same manner as regular milk. Keeping qualities are said to be better than those of conventional milk.

The principal advantage of the concentrate is the reduction in weight of the consumer unit and the saving in delivery and refrigerator-storage space. The net weight of a quart of the concentrated milk is 2½ lbs., whereas an equivalent three quarts of regular milk weighs nearly 6½ lbs. The space saving is equally significant, with regular milk taking up three times as much refrigerator area.

Versatile use is also an advantage. The concentrate can be used full strength for coffee, or it can be mixed with an equal amount of water to make a rich milk for cereal. One-third of a glass of concentrate can be mixed with a glass of ginger ale or other carbonated cold drink to provide an appealing, nutritional beverage for children, many of whom frequently refuse plain milk. The concentrate is useful, of course, in cooking because it can be mixed into recipes in varying strengths.

The container chosen for introducing Sealtest concentrated milk in Wilmington is a 1/3-qt. fibre milk carton. This quantity of milk reconstitutes to a full quart of milk. Recently, a quart-sized container providing three quarts of milk has been made available. The 1/3-qt. container uses a design of blue and red on an off-white stock. The product designation is prominently printed, reverse plate, on a panel of blue. The copy, "Makes one full quart," is printed in an attention-getting red script. Suggested uses and directions are listed on a side panel. The quart-sized container is similar in copy and design.

Final conclusions as to package size and design cannot be made at this time. In some areas regulations pro-

SUCCESS FOR CURRENT TRYOUTS OF FROZEN AND LIQUID MILK CONCENTRATES

COULD REVOLUTIONIZE FUTURE PACKAGING IN MAMMOTH MILK INDUSTRY

hibiting distribution of milk in non-standard quantities may interfere with attempts to use a $\frac{1}{2}$ -qt. container. National Dairy is extending the market to additional test areas, including Lima and Ashtabula, Ohio, where quart and $\frac{1}{2}$ -pt. containers are being used. In Wilmington the concentrate was introduced at the same price as that received for Sealtest Homogenized Vitamin D Grade A.

The big question, however, is not size, price or flavor, but whether the housewife is willing to take on the additional task of mixing water and concentrate to obtain the advantages of savings in weight and space and of the versatility afforded by the new product.

First-week sales in Wilmington were reported as "terrific," but part of the demand was attributed to curiosity. Sales dropped during the second week and have since been subject to a gradual build-up, with about half of the total estimated as repeat orders.

According to National Dairy, seven-years of developmental work were involved in producing the concentrate. More recently, exhaustive laboratory tests and scientifically controlled taste comparisons have been conducted. In Philadelphia more than 100 families used the concentrate during a 30-day test. Family members were then questioned, with 95.7% reporting they could find no difference, or preferred the concentrated milk. Regular milk was liked best by 2.9% of those questioned and 1.4% gave miscellaneous replies.

Frozen product

Beatrice Foods Co., Chicago, is now conducting limited marketing tests of a new frozen and concentrated chocolate-milk drink mix, used in preparing either hot or cold chocolate-flavored drinks, as well as in making puddings and frozen desserts. The result of three years' research, the product is packed in labeled 6-oz. cans—the same size customarily used by producers of frozen orange



MILK IN CANS is tried by Beatrice Foods Co., Chicago, with a chocolate-milk concentrate as first product. Frozen and preserved like orange juice, it uses similar 6-oz. can and reconstitutes to $1\frac{1}{2}$ pints.

juice—and will keep indefinitely in the frozen state. When combined with three parts of water, the new mix produces a full-strength chocolate-flavored drink that is indistinguishable from that prepared with fresh milk.

For its introductory sales tests, staged in the Chicago area, Beatrice Foods adopted a wrap-around aluminum-foil label printed in red, white and gold. The company states that a lithographed can with modified label may be adopted later, depending on when full-scale production is set up for the new concentrate. However, restrictions on tin and aluminum will have an important bearing on any plans to step up commercial production in the near future. The preliminary label, using an all-over gold background with narrow red bands at the top and bottom, carries the familiar Meadow Gold heraldic shield design near the top of the front panel, with the full name of the product beneath it against a white background. This is followed by the

company name and a listing of ingredients. The back of the label bears recipes for hot chocolate-flavored drink, chocolate-flavored pudding and frozen chocolate-flavored suckers. Instructions for making the regular chocolate-flavored drink are summarized in five steps in larger type running vertically on the label. Other directions remind the user to store the product in the freezer compartment of the refrigerator and caution against refreezing.

The manufacturer points out that if and when this concentrate becomes generally available, a week's supply of chocolate-flavored drink may be purchased in a grocery store and conveniently kept at home for use as required. Storage space needed is only one-fourth of that required for the unconcentrated chocolate-flavored drink made with regular fluid milk. Of interest to the producer is the fact that this type of product can be made up and stored in wholesale quantities and shipped (This article continued on page 154)

Packeted cleansers

INTRODUCTION OF SINGLE-USE, MEASURED-QUANTITY ENVELOPES OF DETERGENTS

MARKS EXTENSION OF UNIT PACKAGING TO SOAP AND CLEANSER FIELD

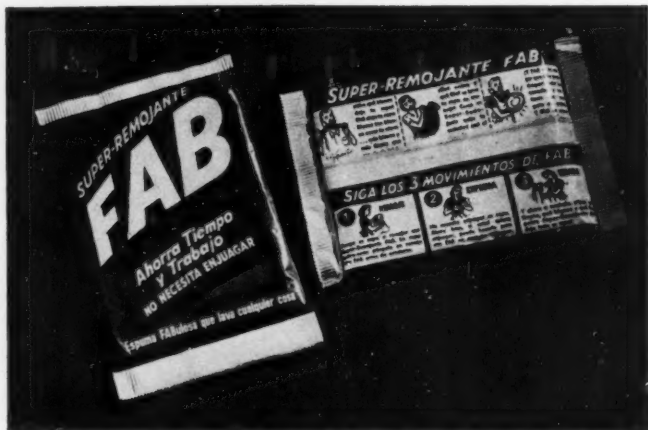
The idea of packaging detergents in envelopes in quantities just sufficient for a single dishpan or a single washtub has been taken up recently by some of America's largest soap and detergent manufacturers and marks what may eventually be an interesting reverse trend in this field, which up to now has moved steadily toward larger and larger package units.

So far, the envelopes are being marketed principally in Latin-American countries, where they meet the need for single-use quantities that can be purchased for a few pennies. At least one detergent manufacturer, however, has introduced a similar package in the home market.

The package is an envelope of super-treated coated kraft paper that provides a pliable web strong enough to be handled on high-speed heat-sealing machines. The base stock can be laminated to meet special requirements for strength and can be coated with a wide range of plastic materials to provide additional protective properties. The envelope is formed and filled on standard-type pouch-forming and filling equipment with only slight modification required to run this style of paper web.

The heat-sealed coated kraft is reported to be well suited for packaging small-unit amounts of detergents or soaps, since it makes a tight seal which prevents sifting of powder. Coatings and the amount of coating can be varied to meet packaging requirements, such as moisture protection or reaction of the product with the coating. This type of packet has previously been used successfully in packaging sugar, salt, spices, pharmaceutical products and coffee.*

Colgate-Palmolive-Peet is introducing packets of "Fab" in Latin-American countries. Procter & Gamble has a similar package, called "Ace," intended for distribution outside this



SMALL UNITS of Fab in laminated kraft envelopes for Latin-American markets appeal to local demand for a minimum-priced quantity of detergent. Design and colors assure brand recognition. Copy is in Spanish.

country and not available to any domestic user. Economics Laboratory, Inc., reports excellent reception for its domestically marketed product "Tetrox," which is being introduced in packets to drug-store and restaurant chains for use in washing drinking glasses and dishes. Bluing is also being marketed in this country in one-shot coated-kraft packets. It is reported, too, that one manufacturer is trying out a packet to be supplied by hotels for the use of guests who have hosiery and underthings to wash.

The detergent put-ups intended for Latin-American countries apparently take into account the fact that packaged cleansers are still something of a luxury with many persons using a coarse bar soap for everything except "Sunday clothes."

Moreover, it is found that dealers in foreign countries often break up units of packaged cleansers to sell customers a more economical, smaller quantity. The small-unit package is also an excellent sampler, being a coupon already converted. The "Fab"

put-up for Latin-American countries actually started out as a sample size and then became a sales unit. Even on an exclusive sales basis it still performs a sampling function, for it is sufficiently low in cost to permit easy buying. The 4-by-6-in. "Fab" envelope is filled by the weight. It contains 1½ oz. of detergent and is packed 72 packets to a shipping carton. Filling is done by a contract packager. The paper is wax laminated to give additional protection against moisture. Design and colors are similar to other "Fab" packages, thus providing family recognition.

"Tetrox," which is marketed for restaurant, hotel and institutional use in this country, takes advantage of an entirely different set of marketing circumstances. Its use is said to result in important savings in the amount of soap required by restaurants and soda fountains in washing a unit load of drinking glasses and dishes. The 3-oz. measured quantity, sufficient for 5 gal. of water, avoids spilling, waste and—even more important—

* See "Paper Coffee Pouch," MODERN PACKAGING, April, 1949, p. 166.

over-soaping of glassware on the part of hurried or careless employees. The manufacturer of Tetrox, after market testing the product for seven months, now reports that production is being expanded for wide-scale distribution. Initial packaging has been done by a contract packager, but subsequent operations will also be done by the manufacturer. The super-treated kraft stock used in forming the Tetrox envelope has a polyethylene coating, providing added protection against moisture.

An even larger potential market looms for measured-quantity soap in home dish-washing and laundry machines. However, little or no interest is now being shown by detergent and soap manufacturers. First of all, there has been the trend in this country not to small, but to large units. The one-shot unit does not encounter the economic encouragement mentioned as a factor in certain foreign countries. In the final analysis, perhaps the biggest obstacle is the question of standard quantities. Different makes of home washing equipment have different requirements as to the amount of cleanser needed for a single use. Also, machine manufacturers' recommendations vary with the nature and the quantity of the load. Packaging in smaller quantities also means the customer must pay higher unit costs for the product than he pays for similar quantities in larger put-ups, since more handling and more packaging material is required for the smaller units.

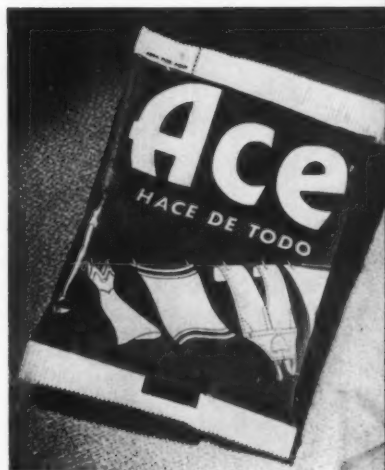
However, similar obstacles have been met and overcome in other fields. Consumer demand for products packaged in amounts convenient for use has strongly asserted itself time and again in the field of packaging.

The huge increase in the number of automatic dish-washer and washing machines would appear to make measured-quantity detergent put-ups a logical field for development. First, there is the convenience of the envelope which can easily be torn open and contents dispensed directly into the washer. Second, proper quantity of detergent is very important to washing results and performance of washing machines. One-shot envelopes of detergents free the user from the chore of measuring proper quantities to avoid wasteful and harmful over-use.

Whether the trend to measured quantities is large or small, it appears the coated paper envelope is well suited to packaging requirements. The advantages may be summed up thus:

Product protection. Dust-tight and moistureproof qualities keep detergent from sifting or from becoming caky or lumpy. Coatings can be varied on the package to meet special product requirements.

Economy. Cost of the paper printed in two colors compares favorably with unprinted transparent film. Product visibility is not, of course, an important sales feature for washing powders. The super-treated kraft, as well



CONVENIENCE of the Ace package, intended exclusively for Latin-American markets, has helped make the product popular. User simply tears along the dotted line and dispenses quantity sufficient for clothing to be washed.

as some of the coatings, are said to be in tight supply at present, but are probably not faced with as uncertain a future as transparent film.

Low-cost production. Continued pliability of paper throughout manufacture and distribution means no loss from broken bags. Heat sealing simplifies closure problem.

Attractive appearance. Bright opaque white stock lends itself well to color printing of brand, company name, etc., providing continued product identity. The coating, of course, can be applied over the printing to give gloss and to avoid soil or scuffing of package.

Convenience in use. Pouch handles well for storage or display. It is easy to open, since paper tears in any direction.

Versatility. A number of uses can be made of the packet-sized unit of soap: (1) for reaching foreign markets, (2) for sampling and (3) to assure usage in correct amounts, thus avoiding the possibility of product waste or over-use.

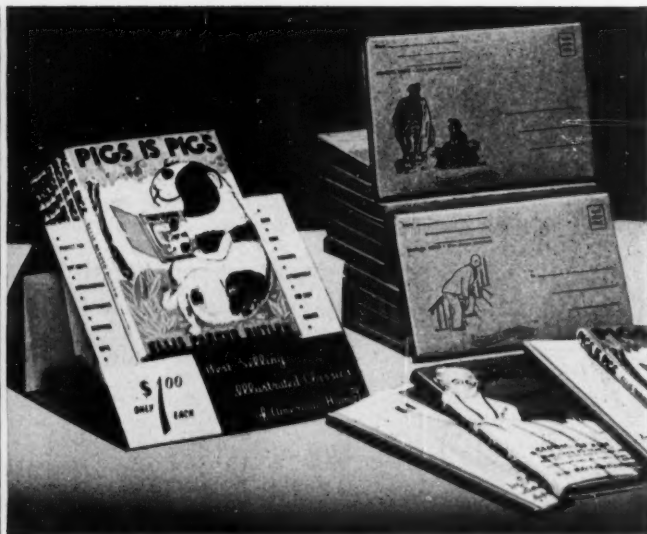
Credits: Coated paper pouch stock, Riegel Paper Corp., New York. Contract packaging of "Fab" and "Tetrox," Trans-Pac Services, Inc., Brooklyn, N.Y., using machinery manufactured by Stokes & Smith Co., Philadelphia, Pa.



INSTITUTIONAL PACK marketed in this country helps prevent spilling and wasteful over-use. The envelope is polyethylene coated. Random design makes for easier pouch-forming and filling operations.



SELF-MAILERS for these popular \$1 gift sellers win dealer and customer favor. Each chipboard folder bears design and name imprint for the book with which it comes.



DISPLAY EASELS are white, yellow and black. Made of paperboard, each of these counter units holds six unwrapped copies for retailer display and customer browsing. Books already in the mailers also are displayed to suggest the ease with which they may be addressed and mailed.

Book boosters NEW APPLICATIONS BY DOUBLEDAY INDICATE

THAT PACKAGING AND DISPLAY ARE FINDING THEIR PLACE IN THIS FIELD

Book publishers, who first turned serious attention to packaging and display as sales aids about a year ago, are still experimenting even though results of their first trials were not wholly successful. Generally, the conclusion seems to have been reached that packaging is advantageous on familiar, low-priced books customarily purchased for gift giving, on standard reference works and on certain volumes for which the package may serve as a permanent carrying case.

Doubleday & Co., one of the publishers who pioneered the first experiments with pre-packaged books,* is now expanding efforts along this line, with indications that book packaging has only begun to explore its potential in the field.

Self-mailer carton

One example of Doubleday's book packaging is a paperboard self-mailer

* See "Pre-Packaged Books," MODERN PACKAGING, March, 1950, p. 78.

designed not only for function and convenience, but also to be highly effective in promoting gift and impulse purchases of inexpensive books.

The self-mailers carry an illustration from the book printed in blue adjacent to ruled address lines on the front of the chipboard carton. The title and author's name appear on the back.

The carton is a one-piece, envelope-style folder with scored flaps that fold over the inserted book, thus permitting easy manual packing and closing. The top flap tucks into the folds of the bottom flap to provide a friction grip for keeping the mailer tightly closed. Tying or sealing is not required.

The mailing carton is intended to stimulate plus sales in bookshops and promote book sales in outlets that do not customarily handle many books. The selection of titles was therefore carefully made so that plus sales could be accurately gauged.

Four titles are being packaged. The first of these is Van Wyck Mason's brief Christmas story, "Valley Forge: 24 December, 1777." First copies were shipped half with mailers, half without. The other titles, all selling for \$1, are "How to Guess Your Age" by Corey Ford, Irvin S. Cobb's "Speaking of Operations" and "Pigs is Pigs" by Ellis Parker Butler. The books were chosen because they are inexpensive, have gift appeal and have sold at a steady rate.

"Pigs is Pigs," published in 1906, has sold about 1,300 copies annually for the past 10 years and has a total sale of more than 225,000 copies. "Speaking of Operations," published in 1915, has sold more than 300,000 copies and since 1940 has averaged 2,700 a year. "How to Guess Your Age," published this year, has had a total sale of 36,000 copies.

A simple black, white and yellow paperboard display easel is included

MODERN PACKAGING

with initial shipments of the self-mailer. The display holder is made as compact as possible so that it can compete for a vantage point on the counter or near the cash register.

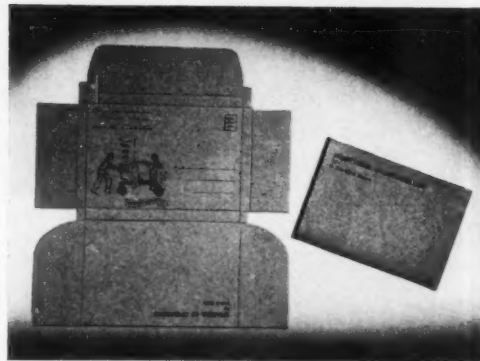
Other new packages

Another new Doubleday package is a brightly printed, coated-board sleeve for a re-issue of the long-standing best seller, "Land Birds East of the Rockies." The sleeve makes a handy carrying case for the pocket-sized book when taken on field trips. Sleeves for the two editions (one bound with cloth and the other with pyroxylin-coated fabric) carry illustrations on bright, attention-getting backgrounds, one a rich green, the other a brilliant red.

The bird guide was formerly packaged in a slip case with printing at right angles to the ends of the package. On the new package, the printing is parallel to the ends of the sleeves. This change was made in anticipation of displaying the guide vertically in a compact unit along with other series volumes possibly to be reissued at a future date.

A display-shipper has been designed for Doubleday's "The Thorndike-Barnhart Comprehensive Desk Dictionary," which will be published in February. Twelve copies of the one-volume dictionary will be shipped in a carton that unfolds into a display rack with a shelf on which one of the dictionaries can be shown opened up for examination. The display-shipper will be packed in a corrugated carton for delivery to retail stores.

SIMPLE CONSTRUCTION of the one-piece folder is convenient for handling, storage and manual packaging. Surface design in blue suggests tone of the book—humorous and serious—and gives title on back.



The compact unit package for dictionaries would seem to be ideal for selling books devoted to a special field, for one shipment means the store owner is in the dictionary business with complete stock and a handy, space-saving unit that serves both as a stock rack and as a complete merchandising display. It is intended to offer retailing convenience in book shops and to open the door to additional outlets that customarily handle only a few books or none at all.

Negative factors

The role of packaging in spurring plus sales of standard titles and opening new outlets for specialty titles is probably most important for publishers at present.

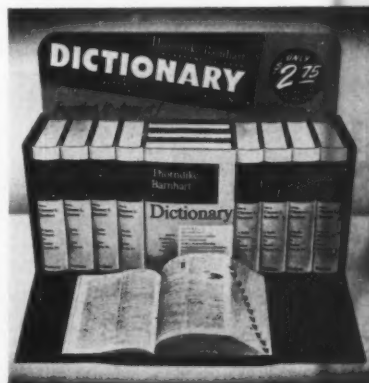
Doubleday concedes that its earlier attempts to package books were only partially successful. A special Easter issue of Fulton Oursler's "The Greatest Story Ever Told" was pre-packaged in orchid-tinted cellophane. The book unquestionably enjoyed increased sales because of the wrapper. Booksellers and jobbers liked the pre-packaging feature from the standpoint that the cellophane kept their stocks fresh and unsoiled.

However, additional experiments with cellophane, where the wrapping had no special relation to seasonal or other promotional themes, failed to

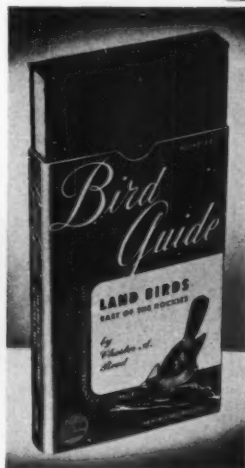
win a clear-cut verdict. On the whole, sales were stimulated, but not sufficiently to justify the added expense, Doubleday concluded.

Book purchasers from long custom like to leaf through the book they actually buy. The displaying of sample copies does not entirely solve the problem. The appeal of a clean, sanitary copy does not altogether offset the book purchaser's strong inclination to browse. Nevertheless, Doubleday, along with other publishers, believes that packaging, properly applied, holds the key to increasing sales.

CREDIT: Cartons and displays illustrated produced by Container Corp. of America, Chicago.



DISPLAY-SHIPPER is a compact, corrugated, hinged case that opens into a self-contained display and merchandising rack for dictionaries. Front panel is slotted and folded to hold covers of one volume open for examination.



RE-USE VALUE is an additional justification for this colorfully printed sleeve carton on a bird manual and is designed to be carried by the bird watcher on field trips.

Packaging Pageant

1



2



3



7



8



1 Wieda's packaged candies, formerly sold in stock boxes, are now appearing in new family-designed boxes. An informal motif provides new display interest. Three different background colors with gold and white are used for the three assortments. Design, Ben Lewis, New York. Box, Taranto Paper Box Co., Ridgefield Park, N. J., using Champion Paper & Fibre Co.'s Kromkote paper.

2 Artist George Petty's calendar girls create an eye-catching package for the new "Petty Girl" panties introduced by Champion Togs, Inc. The package consists of insert cards lithographed in full color, overwrapped with cellophane. Package, Milprint, Inc., Milwaukee.

3 Multiwall bags made of four-ply creped kraft are now being used by the Florida Citrus Canners' Cooperative for marketing Citrus Pulp, a dehydrated citrus by-product feed for cattle. Their advantages are said to be economy, ease of handling and stacking, and improved appearance. Bag, Union Bag & Paper Corp., New York.

4 A smart promotion aimed to put a convenient squeeze bottle of Skol in the hands of thousands of summer vaca-

tionists is this handsome cravenetted bracelet bag of linen or burlap with bamboo handle, which the J. B. Williams Co. is merchandising as a fashion accessory, attractively priced at \$4.98 plus tax, including the bottle of Skol. Bag, Roger Van S., Inc., New York. Polyethylene bottle, Plax Corp., Hartford, Conn.

5 The Fil-O-Matic Corp. is introducing its new Red Tip lighter fluid in a lithographed metal container equipped with a convenient new dispensing device. Simply turn the tubular metal neck projecting from the red acetate closure, squeeze the sides of the can and out comes the lighter fluid. Turning the spout back to closed position locks the pump, preventing release of any fluid. Can, Continental Can Co., New York. Plastic closure, Superior Plastics Div., Commonwealth Plastics, Inc., Chicago.

6 Kraft Foods Co.'s "Ribbon Slices" of cheese (see MODERN PACKAGING, March, 1950, p. 112) now come in a new 3-lb. package for hotel, restaurant and institutional use. It contains an oblong stack of sixteen 10½-in. ribbons. Two blue lines marked on wrapper indicate where to cut for three uniform stacks of 48 standard 1-oz. sandwich slices. "Parakote" wrapper, Marathon Corp., Menasha, Wis.

7 This newly designed carton for The Borden Co.'s Lady Borden ice cream is said to mark the first time ice cream has been sold nationally in a uniform package. The growing importance of self-service food stores as ice-cream outlets prompted the redesign as a means of stimulating impulse buying. Design, Frank Gianninoto, New York. Carton, Bloomer Bros. Co., Newark, N. Y.

8 C. A. Swanson & Son's new "Firmpak" Whole Spring Chicken is reported to be favorably received in several test-market areas over the past two months. A 12- to 14-week-old spring chicken is put into a special shrink-type bag, inserted in the can and processed under a new method said to result in superior taste and appearance. Bag, Visking Corp., Chicago. Can, Continental Can Co., New York. Label, Espen Lithographing Co., Omaha, Neb.

9 Better legibility, recognition in mass display, shelf appeal and memory value are advantages of the modernized can for the Drackett Co.'s Drano cleansing agent. The redesign provides better emphasis of product usage, utilization of space, coordination of type and effective color changes. Design, Lippincott & Margulies, Inc., New York. Can, Heekin Can Co., Cincinnati.

10 Television has brought about an innovation in candy packaging. Gregor Shops have brought out a new "Spotlight Assortment" of boxed candies featuring a miniature flashlight concealed inside the box cover. When the lid is raised, the light turns on automatically to see contents in a darkened room. Box, Lebanon Paper Box Co., Lebanon, Pa.

11 Red Owl Stores discovered that women prefer peanut butter in a squat jar with a wide mouth and straight sides. It is difficult to get all contents out of the sloping-neck jar, they said. In changing the shape of the jar, the label was modified to complement the new shape. Re-arrangement of label design elements gives greater shelf display. Label design, Jim Nash, New York. Jar, Hazel-Atlas Glass Co., Wheeling, W. Va. Label, Magill Colortype Co., Minneapolis.



10



11





NEW CONVENIENCE and safety in surgical operations is provided by a heat-sealed foil-film envelope which preserves sterility of a vinyl drape.

PACKAGE OPENED reveals two inner wraps of glassine, fan-folded in surgical manner. Drape (lower right) has pre-cut opening edged with pressure-sensitive adhesive.

Pre-packaged



(ALL PHOTOS COURTESY MINNESOTA MINING & MFG. CO.)



USE of drape in the treatment of an arm incision. Sterile drape prevents contamination of the operative area from surrounding skin; it is held firmly in place by the pressure-sensitive adhesive edging.

BACKING being removed from pressure-sensitive adhesive strip, which appears at edge of this folded drape. Vinyl unwrapping of drape at the operating table is done by sterile nurse.



Packaging makes a further notable contribution to the convenience and safety of surgical operating-room techniques with the introduction by Minnesota Mining & Manufacturing Co. of vinyl surgical drapes which are factory-sterilized in the package and ready for immediate use.

Surgical drapes are used during operations to isolate and demarcate the operative site from all surrounding parts of the body. They serve to minimize any danger of contamination or infection of the operative site from skin surfaces or foreign objects. Commonly they have been cloth towels, which must be sterilized in the operating room in an autoclave just prior to use and maybe cut to fit the operative site.

Made of the soft but tough, drapable vinyl film, green in color for eye ease and edged with a pressure-sensitive adhesive strip, the new drapes for the first time offer the surgeon a ready-to-use drape of assured sterility for office, emergency ward, clinic, hospital and field use. Their importance in military field hospitals, where time is so important and sterilization facilities are often of inadequate capacity, can be imagined.

for the surgeon

NEW SURGICAL DRAPES OF VINYL FILM POSED A TOUGH PROBLEM OF STERILE PACKAGING FOR THE 3M COMPANY; HERE'S HOW IT WAS SOLVED

The plastic drapes are moisture-proof and adhere to the skin upon contact, forming an impermeable barrier to contamination. Their lightweight construction and pressure-sensitive adhesive permits them to conform to irregular areas of the body, making it easy to drape difficult parts such as the neck, the eyes, etc.

Packaging requirements were that the drape had to be sterilized after packaging and had to remain sterile indefinitely, yet the package had to be capable of being opened quickly and easily without contaminating the

drape. A special inner wrap and special laminated-foil outer envelope made this possible. Here's how:

1. Two fan-folded glassine inner wraps, around the drape itself, protect it from possible contamination during handling and unwrapping. (The double fan-fold wrap is the same as that now used with towel-ing drapes and other surgical supplies in hospitals.)

2. The foil-and-film laminate outer package is easily stored and the sterilized drape inside will remain sterile indefinitely. It will be

ready for instant use at any time in any place, simply by tearing open the envelope.

3. The contents of the envelope are sterilized by subjecting the sealed package to not less than 250 deg. F. in a steam autoclave for 40 minutes, according to standard U.S.P. procedures for surgical sterilization.

The drapes, called "Scotch" Brand Surgical Drapes, are the result of an idea conceived by three Cleveland surgeons—Drs. T. S. Gerspacher, H. D. Fowler, Jr., and D. E. Rolf, all of the Euclid Clinic—who, during World War II service in the field, found themselves handicapped by the lack of facilities for sterilization of drapes.

Research and development work were carried on for more than three years by these surgeons in association with Minnesota Mining & Mfg. Co. before the present pre-packaged, pre-sterilized drape was perfected.

Development work

The first attempt to perfect a suitable package for the drapes utilized two glassine envelopes—one inside the other. Engineers found that the

Steps in packaging



FAN-FOLDING first glassine wrap over the prefolded vinyl plastic drape.



SECOND WRAPPING with glassine, fan-folded in the opposite direction.

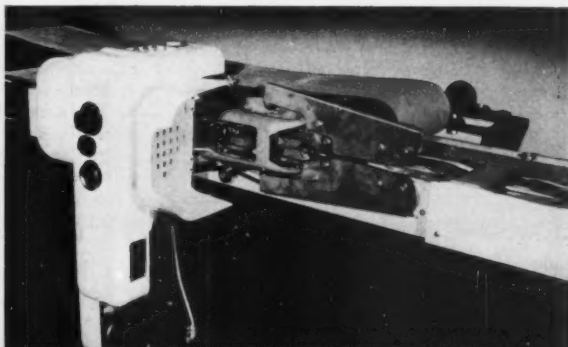


WRAPPED DRAPE is put by hand in prefabricated foil-laminate envelope.

ENVELOPES ARE CONVEYED into a machine which expels air and heat seals the top edge.



VIEW OF MACHINE shows 15-in. preheating bars. High temperature is required for the special vinyl-film-aluminum-foil lamination.



250 deg. heat of sterilization made the glassine dry and brittle, and gave the envelope a scorched appearance. Doctors complained that once the lip was torn from the outer envelope, the inner envelope became contaminated upon removal. They also questioned the glassine envelope's freedom from puncture and resultant loss of sterility. Bacteriologists found that opening and removing the contents from the envelope created danger of contamination.

Confronted with these findings, 3M's research men spent nearly a year studying the problem and experimenting with various packages and methods of sterile wrapping.

The sterile interior wrapping was tackled first. By adopting the double fan-fold wrapping system they found it possible to use a strong, 30-lb. glassine of a special sterilizing grade recently developed to keep the drapes free from contamination.

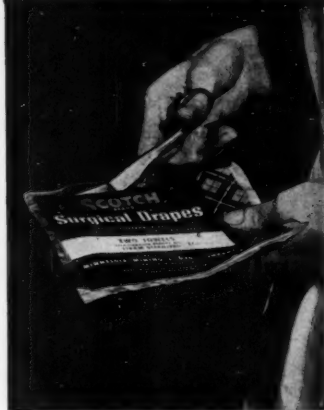
However, the outer package was more difficult. It required a material that could be heat sealed and yet remain positively sealed when subjected to the high heat necessary for sterilization. Experiments included work with a paper envelope and a paper-and-foil laminate envelope, both of which proved unsuitable. The solution was found in a foil-and-vinyl-film laminate construction, specially treated to withstand high temperatures.

Once this moisture-impervious envelope had been adopted, the problem of embrittlement of the glassine under sterilization temperatures more or less solved itself. The embrittlement was caused by loss of moisture from the glassine under heat; the original glassine outer envelope had provided no barrier against such loss of moisture. Under the present procedure, sufficient moisture is sealed in along with the contents of the foil-and-film envelope and once the envelope is sealed it cannot escape. Thus both glassine wraps and drape are protected against loss of strength.

Package production

Today, the prefolded drape goes through two hand-packaging operations. First, it is double wrapped in the glassine—light blue next to the drape and natural over that—and, second, the fan-folded packet is inserted into the foil-and-film envelope. The special vinyl film provides the inside, or sealing, surface.

The package goes right



CIRCULATING NURSE snips off the edge of the envelope with scissors.



PACKET IS REMOVED, still wrapped, and is handed to a sterile nurse.

The envelope is then placed on an endless conveyor track, which carries it through preheaters and an automatic heat-sealing unit. Before the envelope is sealed by knurled rollers, all excess air is squeezed from it.

Batches of the sealed envelopes are then steam autoclaved at 250 deg. F. with 15 p. s. i. of saturated steam. The minimum autoclave cycle requires that the exhaust steam temperature be at or above 250 deg. F. for 40 minutes. Thermocouple readings are also taken from inside selected envelopes to insure that internal temperatures correspond to the exhaust steam temperature.

Every autoclave load—approximately 1,000 drapes—is further double checked for sterility. A percentage of the drapes in each batch is inoculated with an organism (*Bacillus stearothermophilus* N.C.A. Strain No. 1518) of known thermal-death factor. These drapes, especially identified, are then placed in the autoclave and sterilized along with the rest of the batch.

After the sterilizer is unloaded, the inoculated drape packages are tested and cultured for at least 96 hrs. at 131 deg. F. to ascertain the efficiency of the sterilization cycle. Meanwhile, the rest of the sterilized batch is placed in storage and marked "Hold for Bacteriology Check." Only after a negative report is received on the batch and after other quality-control tests have been made are the stored

drapes marked "Released for Distribution" by the bacteriologist responsible for quality control.

The individual drape packages and cartons are then marked with the sterilization-report number, placed in shipping cartons and sent to special storage areas reserved for drapes ready for shipment.

The envelopes are colorfully grave-printed in red, dark green and white—the standard "Scotch" brand colors—with the familiar band of Scotch plaid on the right side of the front panel. A white center strip identifies the contents specifically and carries the imprinted sterilization-report number. On the back panel, directions for use are printed in green against white.

Regulator rotogravure inks, slightly modified for high-temperature resistance, were found to stand up without difficulty under the sterilization procedure.

Each envelope before cartoning is backed with a sheet of 0.030-in. chipboard of the same dimensions, attached to the back of the envelope with a strip of double-coated tape, to prevent damage to the sealed edges of the envelope during shipment. Envelopes are packed in quantities of six or 12—depending on the style of drape—in reverse-tuck folding cartons made of clay-coated newsbacked board 0.028 in. thick. A printed paper label corresponding to the labeling of the envelopes is attached to each car-

to the operating table



STERILE NURSE does the final unwrapping of the envelope for the operating surgeon, who is shown lifting drape from the envelope for use.

ton and the cartons are shipped in 200-lb.-test A-flute corrugated cases, 12 cartons to the case.

The package in use

To ready a packaged drape for use in an operating room, according to aseptic methods, these are the steps:

1. The "circulating" (non-sterile) nurse cuts or rips off the package's foil-and-film laminate lip.

2. This same nurse then removes the packet from the envelope, unfolds the outside (natural) glassine wrap away from the inner blue packet and presents the untouched blue packet to the sterile nurse.

3. The sterile nurse picks up the blue packet in her rubber-gloved hands and removes the drape from the glassine wrap. Depending upon the surgeon's preference, she may or may not open the drape itself and remove the liner covering the adhesive edge.

4. The opened or unopened drape is then handed to the surgeon who applies it to the area desired.

5. After use, the drape is discarded.

In addition to convenience, the vinyl drape has many advantages over ordinary sterile toweling. It is waterproof and unaffected by surgical solvents and detergents. It does not require skin clips, yet will stay in position without slipping. Incisions may readily be extended through the sheet.

The plastic used is, of course, non-

toxic and inert. In some procedures, such as abdominal operations, the drapes are tucked into the body opening to extend the sterile field. In extensive tests, it is reported that no evidence of skin or wound-edge irritation has been found in a single patient. Each drape is dusted with surgical powder prior to packaging.

Presently the line includes four different types—eye, treatment, perineal and towel drapes.

The eye drape is a plastic sheet 36 by 48 in., large enough to cover a patient's head and chest with a 3-by-2-in. elliptical hole that leaves only the orbital area exposed. The aperture is

edged with adhesive that will grip on contact once the liner is removed. The eye-drape package is 7½ by 8 in.

The treatment drape is a rectangle 15½ in. by 17, with an adhesive-edged center aperture 2½ in. in diameter, used in minor surgery, including removal of boils, wens, moles and toenails, and for surgery of hands and fingers. The package is 6 by 6½ in.

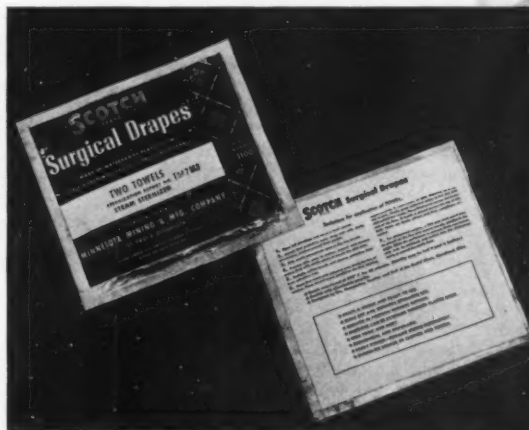
The perineal drape is a solid plastic sheet 15½ by 30 in., with a 1½-in. margin of pressure-sensitive adhesive on one end. Applications include use in dilation and curettage of the uterus, in plastic repair of the vagina and as the upper towel in thyroidectomy. Package size is 6 by 6½ in.

The towel drape is a solid plastic sheet 15½ by 9 in., edged with adhesive on one side, for draping extremities, for abdominal draping and for any other rectangular operative site. There are two separate towel drapes in each 6-by-6½-in. package.

So far as is known, these are the first hermetically sealed, flexible packages successfully to withstand surgical sterilization temperatures. As such, they mark a big forward step in the recent steady development of sterilization-in-the-package techniques.

CREDITS: Envelopes fabricated by Ivers-Lee Co., Newark, N. J., using "Metalam" foil-film material laminated and rotogravure printed by The Dobeckmun Co., Cleveland. Glassine, Riegel Paper Corp., New York. Heat sealer and conveyor, Doughboy Industries, Inc., New Richmond, Wis. Folding cartons, Kaplan Paper Box Co., St. Paul, Minn. Shipping cases, Northwestern Corrugated Box Co., Minneapolis.

FRONT AND BACK of colorfully printed envelope. Note sterilization report number on face of package and complete information about technique of use on the back. The fin-type heat seals are exceptionally strong.



Watch that label!



REMINDER

In many organizations that make and sell packaged products, the production department and the sales department do not always see eye to eye. This is not surprising, since their work is so different. A mutual understanding, however, would go far toward solving many organizational problems. It is the purpose of this article to demonstrate the importance of good labeling to shop personnel, especially with respect to sales through retail outlets.

Plant personnel will cheerfully agree that good labeling is important. But in the nature of things, rarely indeed do plant workers realize completely the full meaning of good labeling unless they have an understanding of the sales problems. Not the sales problems in their own company's sales organization, nor the problems of their wholesale distributors; but the very special problems of that last link in the chain of distribution—the retail store.

Good labeling is within the control of the production department. The plant superintendent will insist that he wants good labeling just as much as the sales department does. All right—there are certain things within his province that can be done to attain it. To be specific: he will demand labels of such a quality, design and character that they can be correctly applied; he will insist on containers that don't create problems on the production line; he will demand

equipment that can apply labels properly as to volume as well as quality; he will insist on machine maintenance on a regular schedule; he will find a place for himself at meetings of the packaging committee, particularly when label changes and production procedure are on the agenda. Above all, he will inform himself as to the buying habits of the retailer and especially of the ultimate consumer in matters affecting packaged merchandise.

This last suggestion is not offered with the expectation—even if it were universally adopted—that it could prove to be a panacea; the field is too broad. But it would provide excellent and helpful background information for the full cooperation needed. It does at least that in the case of an acquaintance of the writer's who makes it a part of his regular routine each week to visit one of the super markets located near where he lives.

Naturally, his first observation point in the store is the section where his own brand is displayed and sold. He is justly proud of the quality of his packaging, including labeling, inspection and case packing. He admits, however, that "Quite frequently I find a package with a defective label—and very quietly I take it off the front row and stick it in the back of the shelf." Interesting from one point of view, but very far from solving the problem. It still leaves the retailer holding the bag.

To elaborate a bit: Let us say that the retailer pays \$2.50 for a 2-doz. case of a certain product. At a price of two for 25 cents, his sale of the

entire case will yield \$3; he realizes 50 cents or 20% gross profit.

Now suppose that two bottles in the case have torn labels, one has a label that is soiled or dirty and one has no label at all. An extreme case? Perhaps, but not at all impossible. It could happen; and when it does, what happens to the retailer's profit picture? He merely trades dollars—if he sells 20 bottles, he simply gets his investment back with nothing for his effort, for the four unsold bottles represent his profit on the case. They can be returned for credit, to be sure; but more than likely they will remain on the shelf, avoided by clerks and customers alike. It's small consolation to close them out finally at reduced prices as seconds. The manufacturer in most cases will replace them, but even so there is a loss because of extra handling charges—a loss traceable directly to defective labeling and poor packaging operations. Obviously, high-quality labeling helps to sell products. Conversely, but equally obvious, poor labeling helps to produce losses.

In most companies high standards are maintained, particularly in the matter of product quality. And the production personnel can be relied on to assume its proper responsibility. However, getting the production department fully to appreciate and help with the problems of the sales department seems often to present difficulties. That is true in too many businesses. In some organizations a great gulf separates the thinking behind labeling as a production operation on the one hand and sales effort as a marketing function on the other; but



* Sales Manager, The Edward Arnold Co., New York.

THIS IS A CASE WHERE SLIPS COUNT, AND THE PRODUCTION WORKER

MUST REALIZE THE EFFECT ON THE CONSUMER AT POINT OF SALE.

By E. King Graves*

a little reflection will convince the most case-hardened production man that—from a sales point of view—proper packaging is as important as product quality. Without proper packaging, the product would be unknown.

Within the shop, there is never any doubt about the importance of such operations as bottle cleaning, filling, pasteurizing, etc., because these operations have a direct bearing on the quality of bottle contents. Labels, of course, have no bearing on product quality, but they have a very direct bearing on sales. Without a high-quality labeling operation, all the care, inspection and control that is lavished on product and process goes down the drain—wasted! And so we come back to our premise: For plant and production workers to realize completely the full meaning of good labeling, they should have a sympathetic understanding of sales problems, which includes at least a casual understanding of the retailer's selling habits and the customer's buying habits.

It is possible to classify retail sales in three categories. Each of the three partakes somewhat of the other two, but the observer who has a bent for sales psychology will distinguish them as impulse sales, reminder sales and selection sales.

The huge super-market development of the past 15 years owes its growth in large measure to impulse buying. While it is true that the self-serve chain store enjoys such other advantages as mass purchasing and reduced store labor, beyond doubt a big factor in their sales success is impulse buying.

Each of us who is at all concerned with family budget problems knows from personal experience how this principle operates. The housewife makes up a list of "must" items, but when her go-cart reaches the check-out counter, it will contain all of the "must" items—plus many more not on the list. Clever display of merchandise, careful grouping of related items and, above all, neat and colorful packaging must be credited for the additional purchases. The shopper buys more than was planned or antici-

pated, and most of the additional purchases are made on the impulse aroused by the package.

The reminder sale is the result and goal of advertising, for the new customer and for the old one who has slipped away. Advertising, it is often said, makes the first sale, and the quality of the product makes the customer.

Like very many clichés in the language of business, this one is only true up to a certain point. Advertising engages the customer's attention when that potential buyer is far from the point of sale; but people forget easily. The prospective customer doesn't often go shopping with an advertisement in hand. Between the message of that advertisement and the consumer's "I want that" a link must be supplied before the buying decision is reached. At this point it is the job of the label to remind the shopper of the favorable impression created by the advertising which was previously observed in the home—or at least not at the point of sale. The package itself must provide that missing link, whether the item concerned represents a product new to the customer or one which for some reason or other has been absent from the shopping list recently.

The selection sale is closely related to the reminder sale. It is a principle that operates in the case of a customer who is a careful planner with a very definite and quite complete "must" list. More than likely—in spite of all the efforts of the manufacturer to make the consumer brand-conscious—the shopping list contains relatively few brand names. The brand

which the consumer purchases regularly will be the first choice. If that brand is missing from its accustomed place or if the package happens to be uninviting due to careless handling, there are plenty of competing products from which a second-choice selection can be made. A well-labeled bottle of some other manufacturer attracts attention—and a sale is made!

Sales of packaged products, then, follow for the most part these three patterns: Impulse, reminder and selection. But no matter which pattern is followed, in every case package appearance is important. The bottle, can or carton must arouse the buying urge. Its initial step in that direction is attracting attention—favorable attention—first, on the part of the retail-store manager who likes eye-catching display for his merchandise and, next, on the consumer whose roving eye takes in everything but lingers on the most attractive items.

Labels and packages are geared to these three patterns. The power of the package to arouse the buying urge relies on artistic design and attractive coloring. No expense is spared to make the label equal to its job. Advertising emphasizes the point by tying in with and supporting the package. The sales effort—and sales are the goal—costs the manufacturer heavily in salesmen's time, in advertising-men's time, in designers' time. A package with a sloppy appearance may annul the entire investment which the company has made.

This is a heavy responsibility. The labeling must be so carefully and neatly done that the full value is obtained from all the elements of



product quality, careful packaging operations and artistic design. A label that is applied all skew-gee, a bottle with a smeary smudge of adhesive, can cancel out all the careful thought and hard work that has been expended up to the point where the container reaches the labeling machine, and dissipate all the intelligent sales effort which follows the labeling operation. Nothing less than perfection can be accepted as the goal—a goal set up for every bottle, carton or can. A single defective or unsalable package can engender ill will because it may represent the retailer's profit or result in a consumer's almost subconscious rejection of your product.

So far, this discussion has attempted to convey to production personnel—in terms of sales—the *why* of good labeling. It would be a very inadequate treatment indeed if it omitted any mention of the *how* of good labeling.

Labeling, though it performs a sales function, is a mechanical operation. To assure high-quality labeling, proper maintenance of equipment is paramount. Good labeling will reduce package losses; will eliminate, to a degree at least, costly repairs; will reduce glue consumption; will reduce the possibility of serious breakdowns. In a well-organized maintenance program, Rule No. 1 for adhesive equipment is *keep the machine clean*. Your adhesive supplier, as well as the maker of your equipment, doubtless can provide you with very detailed instructions for cleaning—and keeping clean—your labeling machines.

But proper maintenance isn't all; there are other problems in connection with labeling, due to other causes than improper care, such as machine adjustment, normal wear and tear of equipment; poor quality of glue, peculiarities of the label and the paper on which the label is printed, or adverse atmospheric conditions. The last three are not always taken into consideration when attempts are made to run down the causes of poor labeling.

For the guidance of the "trouble shooter," the accompanying check list may be found helpful. It represents the thinking and experience of people in the fields of paper making, machine manufacture and adhesive production. It will help to identify the trouble, trace the cause and make proper corrections.

TROUBLE	PROBABLE CAUSE	REMEDY
Labels curling away from bottles	Labels too stiff. Labels too springy. Label paper incorrectly grained. Too much glue. Inefficient wiper action. Use of glue with insufficient tack. Glue on grippers.	"Roll" or flex labels before running by bending label stacks in direction of application (but make sure they lie flat in label box). Humidify labels before running them. Store labels face down, with weight on top. Specify labels with horizontal grain direction. Adjust scraper close to roller. Clean, adjust or replace wipers. Apply glue concentrated, adding only water prescribed. Inquire for a suitable grade of tackier glue. Wash grippers and dry.
Wrinkling or blistering of labels	Too much glue. Too much moisture in glue. Label pickers not swinging far enough into label box. Inadequate back-up pressure.	Adjust scraper close to roller. Use glue with high solids (low water content). Adjust label picker swing. Grease yokes. Check friction brake shoe pressure.
Labels not removed from label box	Label pickers not swinging far enough into label box. Inadequate back-up pressure. Application of inadequate or excessive glue to the label pickers. Label box hooks gripping labels too tightly or too loosely. Glue lacking sufficient initial tack to pick labels out of label box.	Adjust label picker swing. Grease yokes. Check friction brake shoe pressure. Adjust scraper to provide thin, even film on roller. Clean dried glue from hooks. Smooth hooks with fine emery cloth. Check hook adjustment. Run glue concentrated, applying minimum film. Try a tackier label glue.
Spotty adhesion	Transfer and glue rollers not in proper contact. Uneven transfer of glue. Worn transfer roller. Water not thoroughly mixed into glue. Picker plates not clean.	Adjust rollers. Adjust scraper to provide uniform clearance with roller. Replace roller. Water should be added to glue slowly and mixed thoroughly before placing in glue pan; when diluting glue already in pan, use thin mixture and stir well. Clean picker surfaces with a weak detergent and dry thoroughly.
Tearing of labels	Faulty adjustment of label box. Glue on wipers.	Adjust hooks so label stacks rise freely. Smooth hooks with fine emery cloth. Clean wipers with warm water to remove accumulated glue.
Labels falling off bottles	Too much glue. Inadequate glue supply. Improper type of adhesive.	Adjust scraper closer to roller. Refill glue box. Consult adhesive supplier.
Smearing of bottles or labels	Too much glue.	Adjust scraper closer to roller.
Crooked labeling	Uneven application of glue on the labels. Grippers not holding firmly. Unevenly worn wipers. Excessive glue application. Rough or gummed-up hooks on label box.	Check scraper blade for foreign matter. Check arrangement of transfer and glue rollers. Align scraper and roller. Adjust gripper and pressure. Adjust gripper timing. Replace worn wipers. Adjust scraper closer to roller. Clean and smooth hooks.
Bottles jamming between pusher bar and intake guides	Star wheel mistimed.	Adjust timing of star wheel.

Flying cake box

SENDING CAKES TO BAKERS BY AIR, IN WINDOW CARTONS THAT BEG FOR CARE,

IS SUPPLY FIRM'S WAY OF SAMPLING ITS PRODUCTS

Sending cakes to bakers may seem like a new version of carrying coals to Newcastle, but for Henry & Henry, Inc., Buffalo, manufacturers of baker's ingredients, it was the only practical means of providing prospective customers with an effective sample of a finished product made from Henry & Henry's own products. The use of the sample cake was made possible because a package was found that protects the product, speeds delivery and commands the receiver's attention and good will.

Most of the firm's prospects are quite distant from the company's Buffalo, N. Y., plant. This made for a problem in delivering sample cakes without damage and without the cake becoming somewhat less than a perfect product because of the time required for delivery.

After considerable experimentation, Henry & Henry selected a special window-type corrugated carton to be used for air-express shipment of sample cakes prepared in the firm's laboratory kitchen. The air-express carton solved the problem very well. First, air express assures rapid delivery direct to the person for whom the sample is intended. Second, use of a transparent-film window alerts transportation personnel to the fact that the carton contains a beautifully iced cake requiring special handling. Third, the carton presents a neat and easy-to-open package without mess or bother when it is delivered to the prospect's office.

In practice, it has been found that the window presents a psychological barrier to the mishandling of the cake. It also assures prompt opening of the package by the receiver.

A special sticker applied to the top of the carton calls attention to the fragile nature of the product and the need for speedy delivery. The informality of the rhyme on this caution sticker (see illustration of the packaged cake) is certain to create out-of-the-

ordinary good will for the sender. Its originality should be a challenge to the many users of stickers who never go any farther than routine requires, thus losing a labeling opportunity that can be used by the manufacturer to his distinct advantage.

"Handle with care" stickers are often ignored and the conventional "quality product" claim is used so much that it has little impact. The Henry & Henry label has a fresh and sincere approach that can't help but win attention and achieve functional purpose.

A return-receipt card on which condition of the product can be indicated is included with each package. Besides advising Henry & Henry whether the sample was delivered satisfactorily, the return card also assures the firm that delivery was made to the proper person.

The carton used for air-express shipments of the sample cake is made of three pieces: (1) outer case with hinged window lid, (2) inner liner with hand cut-outs for easy removal of the cake and (3) a white pressed-board disk, which is fastened to the inner liner with a weight staple. Ridges on the disk prevent side movement of the cake. The package can be tilted at a sharp angle in handling and the cake, because of the friction grip of the grooved disk, will not slide into contact with the liner and smear the icing. When the two ends of the weight staple are pressed together, cake and disk can easily be removed from the inner liner. Cartons are secured with gummed paper on all exterior seams to provide a seal that keeps dust out and moisture in. Protection against moisture loss is essential so the cake will not become dry and lose the appealing fresh taste that is so important to make it a salesman of Henry & Henry ingredients.

CREDIT: Window carton, Lawless Bros., North Tonawanda, N. Y.



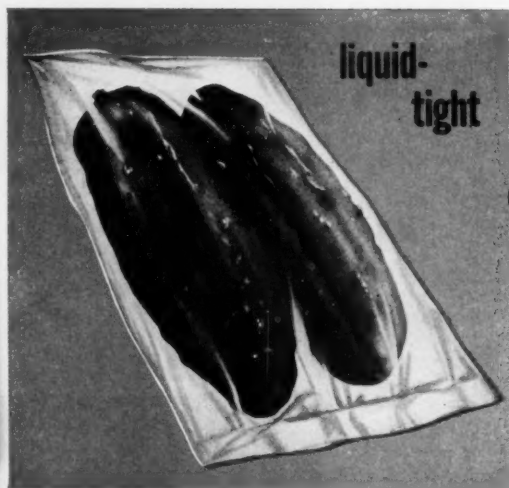
SPECIAL HANDLING is assured this cake in air-express shipment. Originality of "patty-cake" caution sticker commands interest and good will.

PROTECTION AND CONVENIENCE are features of three-piece box. Disk holding cake is fastened to liner with weight staple; hand holds are in liner.



Best way to wrap up a

Hard-to-package products look better, keep



liquid-
tight

PLIOFILM seals pickles, sauerkraut and oysters in their own brine, without leakage or moisture loss. Lets customer see contents.



strength
to spare

PLIOFILM holds up to 10 pounds of any bulky fruit or vegetable, without danger of breakage— aids volume selling.

FOR more than twelve years industry has been solving many of its toughest packaging problems with **PLIOFILM**—Goodyear's transparent rubber hydrochloride film.

This unique film has many advantages. It is tough and durable, with strength to hold heavy goods. It is hard to tear, split or puncture—won't shatter or run. It seals moisture in—or out—insuring quality protection. It has good dimensional stability—doesn't pucker or shrink. And its sparkling transparency gives your product a "buy me" appeal.

Got a packaging headache? Maybe **PLIOFILM**'s your medicine, too. Write: Goodyear, Pliofilm Dept., Akron 16, Ohio.

problem

better in PLIOFILM



puncture-resistant

THE PERFECT WRAP for roasts, poultry and all irregular products. PLIOFILM won't shatter or run. Its clear transparency speeds self-service sales.



prevents corrosion

PLIOFILM keeps spark plugs from rusting and corroding by sealing out harmful moisture. If your problem involves keeping moisture in or out, try PLIOFILM.



insures cleanliness

PLIOFILM keeps linens and other textiles clean until sold. Doesn't shatter or split in shipment—eliminates rewraups.

Good things are better in

Pliofilm

3-way protection against air, moisture, liquids



We think you'll like "THE GREATEST STORY EVER TOLD"—Every Sunday—ABC Network

MARCH 1951

Pliofilm, a registered trademark of The Goodyear Tire & Rubber Company, Akron, Ohio

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Revolving action, interior lighting, convenient size (10 by 15 in.) and full color are combined in this Carousel watchband display for Speidel Corp. Four plastic packages holding the watchbands form wings which frame the interior-lighted, full-color transparencies housed under a gold and white carousel top. On the deck of the unit is space for displaying watches. Display, Einson-Freeman Co., Inc., Long Island City, N. Y.



This "Barber Shop Quartette" display carton is aimed at counter promotion of four A. C. Hynd Corp.'s barber-shop products in one unit as a gift item. Die-cut and scored figures are removable as kid cut-outs. The carton also includes a vault for used razor blades. Separate pieces may be attached to the display carton to make it suitable for birthday, Christmas, Valentine Day or Father's Day. A display card promotes the unit as "Four-part harmony." Display, Gebhart Folding Box Co., Dayton, Ohio.

DISPLAY

A single circular piece of board cut spirally like the peeling of an apple gives a new twist to this outstanding new bottle topper used by the Wine Growers Guild of Lodi, Calif. It is designed to tie in with other advertising material following the Xavier Cugat theme. One end of the musical note carries a picture of Cugat, while the other provides space for price marking. Display, Lehmann Printing & Lithographing Co., San Francisco.



United Motors Service, Div. of General Motors Corp., displays its complete line of sizes of thermostats in this fibreboard unit, suitable for counter or wall use. It is constructed in one piece and lithographed in two colors. Thermostats are easily removed and refilled from this compact merchandiser, which measures only 18 in. high, 15 in. wide and 3 in. deep. Display, Display Div., River Raisin Paper Co., Monroe, Mich.





Gold-colored foil printed in purple, yellow and white provides an attention-getting display for the Ohio Confection Co.'s Fudge Bars. Carton ends are pulled out to form a basket for jumble display of the candy bars on counters of candy and drug stores. Back piece folds down and a printed protective paperboard cover is fitted over the carton, making a shipping unit. Display carton (Gair-Reynolds Foilene), Cleveland Cartons division of Robert Gair Co., Inc., New York.

GALLERY

Tuffy Twenty-Seven shoe laces—a "family package for ladies and men"—are displayed in this metal rack created especially for super-market selling. Newest product to be introduced by Henry Thayer Co., the laces are affixed to die-cut, scored cards. The card packages are hung on three metal arms projecting from the top of the unit through circular holes at the top of the cards. Only copy on the display is "shoe laces" silk screened at the base of the unit. Display, B. Jastremsky Co., Boston. Printed front piece, Cambria Display Studios, Boston.



MARCH 1951

The clean, uncluttered appearance of the actual Lucky Strike cigarette package is reflected in this floor stand dispenser which is a giant replica of the 20s pack. The unit is made of sturdy paperboard and when placed at heavy-traffic points, stacked with cartons of Luckies, stimulates impulse buying. The "Be Happy—Go Lucky!" slogan is prominent at the top. Merchandiser, Consolidated Lithographing Corp., Brooklyn.



Bristol-Myers' "Trushay—Buy Two" display is designed not only to spur individual sales in larger amounts, but also to tie in with the company's advertising theme for Trushay hand lotion—"Keep one in the kitchen; keep one on the dressing table." Eight individual paperboard sleeves for holding actual bottles of the lotion, together with a counter display card, comprise the display. The 98-cent price for two bottles is given prominence. Display, Carl Percy, Inc., New York.



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Packaging Show a sell-out

WILL FILL ATLANTIC CITY CONVENTION HALL FOR THE FIRST TIME;

THROUGH TRAIN SERVICE ARRANGED; CONFERENCE PROGRAM IS TAKING SHAPE

Packaging people will travel in unprecedented comfort to the biggest packaging show in history at Atlantic City next month. On the basis of responses to the postcard-poll of interest in January's MODERN PACKAGING, the Pennsylvania Railroad has announced that through sleeping cars to Atlantic City will be operated on the night of April 16 from eight Midwestern and Eastern cities. Meanwhile, the American Management Assn., sponsor of the show, revealed that all booth space had been sold 60 days in advance of the opening, assuring that the National Packaging Exposition for the first time will completely fill the huge Atlantic City Auditorium, the world's largest exhibit floor.

A total of 242 companies thus will participate in the 20th national exposition, running from April 17 through April 20, occupying more than 80,000 sq. ft. of floor space. The total area of the show will be in the neighborhood of 140,000 sq. ft.

Both exhibits and conference sessions will be centered on today's twin problems of military supply and home-front shortages. Many of the exhibitors are laying stress on Government requirements for overseas shipment and will show moistureproof packages, packages designed for rough handling overseas and packages designed to protect products under unusual climatic conditions. Many others will feature substitutes for materials already in short supply or expected to become short.

The Pennsylvania Railroad's plans for through service depend upon actual bookings of space. It should be emphasized that those who responded to the postcard-poll must still make their ticket arrangements through Pennsylvania agents, and this should be done as soon as possible, merely specifying that space is desired on a through car or through train to Atlantic City for the National Packaging Exposition.

From replies received to the postcard, it appears that the great majority of visitors want to arrive on Tuesday morning, April 17. Accordingly, all special trains are booked to leave their points of departure on the night of the 16th. No through service will be available on any other night.

Tentatively, Packaging Exposition Special Trains are scheduled to leave as follows (all times given being local standard time): from St. Louis, 9 a.m.; from Chicago, 12:30 p.m.; from Detroit, 5:40 p.m.; from Cleveland, 8:30 p.m.; from Buffalo, 9 p.m.; from Pittsburgh, 11:25 p.m. All of these trains are due to arrive in Atlantic City about 8:35 a.m., April 17, in time for the Exposition which is scheduled for opening at noon.

Other trains tentatively planned will leave Washington at 1:30 a.m. and Boston at 12:05 a.m. April 17, reaching Atlantic City about 10:05 a.m. the same day.

Passengers from points beyond these eight terminal cities are, of course, expected to arrange their own schedules so that they can connect with the specials at the times given.

This schedule is based on sufficient actual bookings developing from each of these points to warrant consolidation of equipment for operation of special trains. If extra train operation is not warranted, but travel justifies operation of extra cars from any of these points, the arrival at Atlantic City will be approximately 10 a.m. for cars from St. Louis, Chicago, Buffalo and Pittsburgh, and about 12 noon for cars from Detroit and Cleveland. The other alternative will be the usual changing of trains at North Philadelphia.

To insure the extra service, it is necessary that all those interested contact the Pennsylvania's Division Passenger Agent at one of the eight cities listed *no later than April 6*, and preferably sooner.

According to P. O. Vogt, AMA vice president for the Packaging Division,

the program for the Packaging Conference, which will be held concurrently during the first two and a half days of the Exposition, is being planned with a view to giving the very latest and most accurate reports on probable availability of packaging materials, case stories of what packaging companies are doing to cope with shortages and concrete information on packaging requirements of the Armed Forces.

Top packaging officials from all branches of the Armed Services will participate in a session on military packaging the first day. Another session will be devoted to forecasting the supplies of all basic packaging materials. "New Packaging Materials—Their Characteristics and Uses" will be discussed by Robert de S. Couch, head of packaging research for General Foods Corp.

Case stories of procedures their companies have developed to solve packaging problems in the present period of shortage will be presented by Charles D. Mattingly of The Coleman Co., Inc., Wichita, Kan.; C. E. Sherwood of S. C. Johnson & Son, Inc., Racine, Wis., and A. C. Benjamin of Junket Brand Foods, Little Falls, N.Y.

Other topics on the agenda are "Packaging Lessons from the Last War"; "Significant Advances in Package Printing" and "Maximum Use of Packaging Equipment Through Proper Maintenance." The complete Conference program and other guides to the show will appear, as usual, in the forthcoming April issue of MODERN PACKAGING.

Although indications are that the crowd of visitors, along with other aspects of the show, will set a new Atlantic City record, hotels have promised accommodations for all through the Housing Bureau of the AMA National Packaging Exposition, 16 Central Pier, Atlantic City. The last Atlantic City Packaging Show, in 1949, drew 11,000.

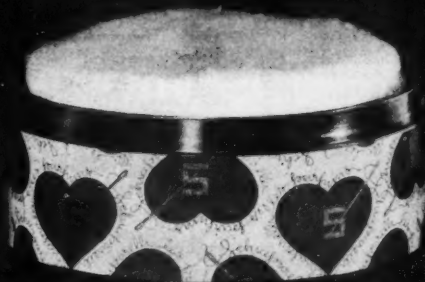
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the quality you want
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Our machines meet a great variety
of packaging requirements.

Look about you in retail outlets and you'll see many packages that feature new and ingenious improvements—improvements that result in GREATER SALES . . . You will also find that in an impressive number of cases such sales-winning packages are being produced on machines designed and built by PACKAGE of Springfield.

In meeting today's demand for package improvement, our Engineering and Designing Department brings to bear the skill and experience gained in serving leading manufacturers for the past 38 years. And our more than 80 standard models of machines lend themselves to such a diversity of requirements, that by simple adaptations we can usually supply a machine which will fill a new need most economically.

We'll be glad to study your plans for package improvement or ways to lower costs.

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See us at the **PACKAGING SHOW**
Booth 315, Atlantic City Auditorium, April 17-20

PACKAGE MACHINERY COMPANY

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NEW YORK	CHICAGO	BOSTON	CLEVELAND
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SAN FRANCISCO	SEATTLE	TORONTO	MEXICO, D.F.

TECHNICAL

ENGINEERING • METHODS • TESTING

Charles A. Southwick Jr. • Technical Editor

Polyamide resin suspensoids

A NEW FORM OF THE VERSATILE SOYBEAN PLASTIC PROMISES ANSWERS

TO MANY PACKAGING ADHESIVE PROBLEMS. By Harold Wittcoff*

Packaging problems—posed by a world at war as well as one at peace—make stringent demands on adhesives and resins. Resin-based adhesives must accomplish many functions, including the coating of paper, the sealing of packages, the sealing of labels to packages and the protection of package contents from water vapor, salt spray and grease. In addition, modern packaging equipment requires that adhesives be reasonably easy to apply. Since these varied problems rarely find their solution in one material, the manufacturer must often employ several adhesives for a single package.

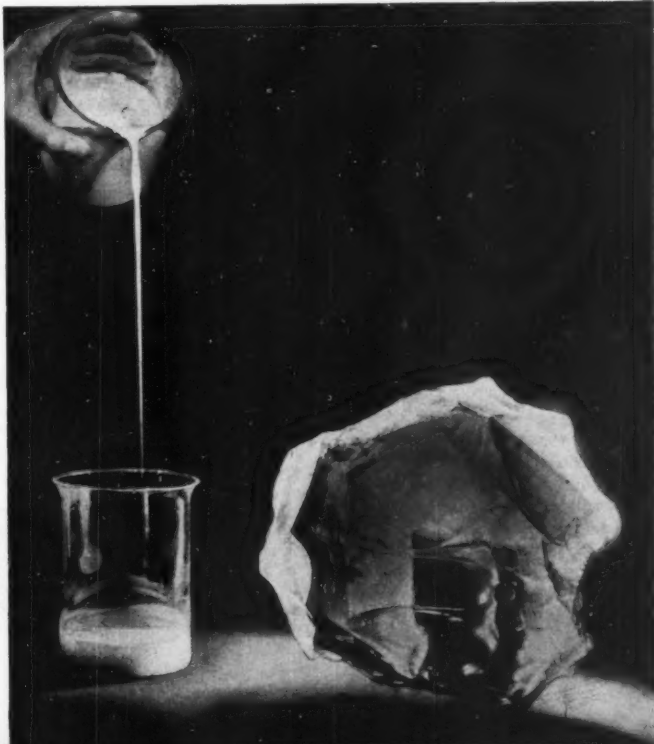
A product which promises to solve these problems is the recently announced polyamide resin suspensoid. Polyamide resin, a condensation product of dimerized and trimerized acids of soybean oil with ethylene diamine, was first introduced to the packaging industry on a commercial scale some three years ago.† Originally offered for use by hot-melt or solvent application, these resins gained wide and ready acceptance; they provided water-vaporproof and greaseproof films

that heat sealed at relatively low temperatures. It was realized, however, that the vistas of polyamide resin might be greatly expanded if it could be produced in the form of a water suspensoid or emulsion.

General Mills Research Laboratories set to work on this problem with the goal of producing a water coun-

terpart of polyamide resin that would in no way detract from the virtues of the resin itself. It is known, for example, that many emulsifying agents tend to impart tack to non-blocking resins; in their work, General Mills researchers insisted that the excellent non-blocking properties of polyamide resin must not be decreased by com-

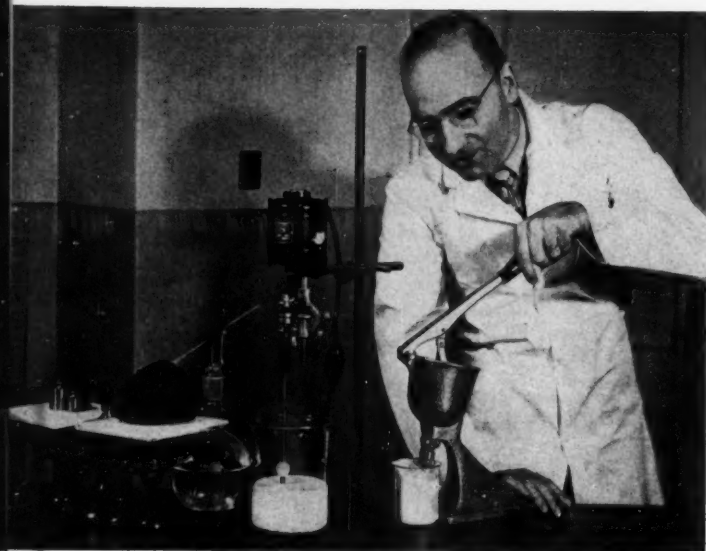
PHOTOS COURTESY GENERAL MILLS



CHANGE OF FORM is illustrated by this comparison of new water-dispersed resin (left) with solid block of polyamide resin.

* General Mills Research Laboratories, Minneapolis, Minn.

† See "Polyamides," MODERN PACKAGING, Oct., 1947, p. 143.



LABORATORY PREPARATION of polyamide resin suspensoid is demonstrated at General Mills' Research Department by Dr. Witteoff, the author.

bination of the material with water. Suspensoid forms of many resins are also known to have less water-vapor resistance than the undispersed resin; General Mills scientists carefully guarded against a reduction in this property as they formulated the polyamide resin suspensoids.

The key to the successful production of a water-dispersed polyamide resin lies in the dispersion technique. This technique has not been made public as yet; its net result is a cationic dispersion that lays down a film composed of discrete particles. This film is easily fused and is then in every way comparable to the film of polyamide resin laid down from solvent or by hot-melt procedures.

After reaching this stage in its development program, General Mills decided to use the suspensoid in an attempt to improve some of the properties of polyamide resin. Modern packaging problems, of course, demand constant improvement.

One of the properties in need of modification was the resin's narrow sealing range. Although polyamide resin adhesives seal at very low temperatures (80-100 deg. C.), they may not produce good seals at higher temperatures; for if the resin film becomes overheated, the resin may soak into paper or become too fluid

to establish a bond. Since polyamide resin in suspensoid form is compatible with numerous materials with which it is not compatible either in hot-melt or solvent form, this problem was readily solved. By judicious compounding, General Mills has devel-

oped compositions which possess very broad sealing ranges and which provide seals of great strength. Of particular merit in this respect are Polyamide Resin Suspensoids B-1001x and E-200.

The suspensoids have also made it possible to improve the cold-temperature resistance of polyamide resin seals; although these seals were fairly good with the solid resin, there are applications which require that bonds be stable at very low temperatures for extended periods of time. Again, it was possible to compound a suspensoid to accomplish this purpose. In general, then, the ease with which the suspensoids may be compounded has enabled them to solve a great variety of problems posed by various actual and potential users.

Types of suspensoids

The basic polyamide resin suspensoid bears the code designation A-000. This material is a water counterpart of General Mill's Polyamide Resin No. 95. It is important to realize that Polyamide Resin No. 95 contains, in addition to the polymer prepared from the condensation of dimeric and trimeric vegetable acids with ethylene diamine, small quantities of Santicizer 8 (Monsanto), Staybelite Ester #10 (Hercules Powder Co.) and paraffin. Suspensoids free of these additives are also avail-

TABLE I—PROPERTIES OF GENERAL MILLS POLYAMIDE RESIN SUSPENSIDS

Property	Polyamide Suspensoid			
	A-000	B-200	B-1001x	E-200
Per cent solids (minimum)	35	37	42	39
Viscosity at 25° C. (poises)*	0.4-0.9	0.5-1.3	12-15	5-7
Pounds per gallon at 25° C.	8.4	8.5	8.5	8.5
Appearance (color)	Opaque-white	Opaque-white	Opaque-white	Opaque-white
Mechanical stability†	Excellent	Good	Excellent	Excellent
Odor	None	Slight aromatic (sweet)	Slight aromatic	None
pH	4.9-5.2	4.9-5.2	4.0-5.0	4.0-5.0
Acid number	3-5	3-5	5-12	3-5
Particle size (microns)	1	1	1	1
Particle charge	Cationic	Cationic	Cationic	Cationic
Settling rate	Very slow	Negligible	Very slow	Very slow
Solvent tolerance	Good	Good	Good	Good

* Viscosities were determined by means of a MacMichael Viscosimeter.

† Judged by centrifugation tests.

able for cooperative research under the code designation A-001x. In addition to Polyamide Resin Suspensoid A-000, three other types are available, each of which has been compounded to provide specific, desirable properties. The properties of all of these suspensoids are listed in Table I.

It will be observed that although their solids content varies from 35 to 42%, the viscosity of the suspensoids is quite low. Naturally, this viscosity may be increased by the addition of various thickening agents such as methocel, polyvinyl alcohols, various natural gums, carboxymethylcellulose, low molecular weight acrylic resins and related materials.

The viscosity of suspensoids with higher solids content is also higher, and such materials, like products free of compounding agents, are available for cooperative research.

The suspensoids possess very slight odor, a fact which is, of course, extremely important in the packaging field. Feeding tests with rats also indicate that the suspensoids have no gross toxicity.

Of special importance is the mechanical stability of these suspensoids. Polyamide Resin Suspensoid A-000 may be subjected to continued stirring, to the effect of high temperatures and to repeated freezing and thawing without harm to its properties. This stability of the basic material is reflected in some of the compounded products and the E-200 composition is even more stable than the A-000 Suspensoid.

The average particle size of polyamide resin suspensoid is in the region of one micron. This value, determined by examination of the suspensoid with both a light and electron microscope, is illustrated in the typical micrograph shown in Fig. 3.

As previously indicated, the suspensoids are cationic and have pH's in the region of 4-5. They are, therefore, compatible with any other cationically or non-ionically dispersed material. The versatility of the suspensoid, however, is demonstrated by the fact that this cationic charge may be reversed. For all practical purposes, the suspensoid then becomes anionic and is compatible with a great variety of anionic latices, emulsions and dispersions. This reversal of charge is accomplished by the rapid addition to the stirred suspensoid of an anionic detergent such

TABLE II—PROPERTIES OF GENERAL MILLS POLYAMIDE RESIN SUSPENSOID COATINGS

Property	Coatings from Polyamide Suspensoid			
	A-000	B-200	B-1001x	E-200
Color	Cream	Cream	Cream	Cream
Clarity	Opaque-dull	Opaque-dull	Opaque-dull	Opaque-dull
Solvent resistance	Good	Good	Good	Good
Water resistance after fusion	Excellent	Excellent	Excellent	Excellent
Grease and oil resistance after fusion	Good	Good	Good	Good
Heat sealing temperature (° C.) ^a	90-100	60-120	70-150+	90-170+
Blocking (no block at) [†]	60°C./75% R.H./1 p.s.i./24 hr.	60°C./75% R.H./1 p.s.i./24 hr.	60°C./75% R.H./1 p.s.i./24 hr.	60°C./100% R.H./3 p.s.i./24 hr.
Stability of bond at -30° C. to +70° C.	Fair	Excellent	Excellent	Excellent
Burning rate	Low	Low	Low	Low
Physiological**	Non-toxic	Non-toxic	Non-toxic	Non-toxic
Odor	None	None	None	None

^a Sealing temperature was determined by subjecting a 3-in. strip seal to the action of heated jaws for 5 sec. at 9.5 p.s.i. The seal was arranged so that a tension of 35 g. is exerted immediately upon the release of the jaws—that is, while the seal is still hot. Sealing is said to result at a given temperature if the seal holds under these rather strenuous conditions.

[†] Blocking tests carried out according to TAPPI standard T-477-M-47. Films coated on label paper at 4 lbs. per ream (500 sheets, 20 by 25 in.).

** Results of toxicity testing indicated that polyamide resin suspensoid is not grossly toxic. It was included to the extent of 10% (17.8% moisture) in the diet of four rats for a period of 12 days. At the end of this time, the animals were in as good condition as the control animals and did not indicate abnormalities on autopsy.

as Nacconol NRSF (National Aniline).

The properties of coatings prepared from the various polyamide resin suspensoids are listed in Table II.

Of particular interest is the broad heat-sealing temperature demonstrated by coatings of the B-200, B-1001x and E-200 suspensoids. Despite the low temperatures at which these compositions seal, however, they do not block at the relatively high temperature of 60 deg. C. under various conditions of pressure and humidity. Recently, in fact, it was found necessary to prepare a composition with an extended sealing range that still would not block under the very severe conditions of 10 lbs. p.s.i. pressure at 40 deg. C. and 100% relative humidity for a period of one week. An experimental suspensoid composition (A-003) has been devised which meets this blocking requirement and which seals at low temperatures to cellulosic materials, including moistureproof cellophane.

In packaging applications, it is important for coating films to dry rapidly. The rapid drying times of the

polyamide resin suspensoids at room temperature are indicated in Table III.

TABLE III—DRYING TIME OF POLYAMIDE RESIN SUSPENSOID COATINGS

Polyamide Resin Suspensoid	Drying time (minutes) at 50% R.H. and 73° F.
A-000	19
B-200	12
B-1001x	12
E-200	14

Naturally, these drying times are greatly accelerated at increased temperatures. By way of comparison, a film from a solvent solution of polyamide resin (35% solids in isopropyl alcohol-toluene, 1:1) dried under similar conditions in eight minutes.

Water-vapor-permeability and greaseproofness tests were carried out on films of Polyamide Resin Suspensoid A-000. For the former, TAPPI standards T-448-m-40 were used with a relative humidity change of 65 to 0% at 72 deg. F. For the greaseproofness tests, TAPPI Stand-

TABLE IV—WATER-VAPOR RESISTANCE OF POLYAMIDE SUSPENSOID A-000

Coating	Ream weight	Flat or fold	Water-vapor permeability (g./m ² /24 hrs.)
None	—	flat	181.0
Unfused	9.5	flat	202.0
Unfused	10.0	fold	206.0
Fused	9.0	flat	2.9
Fused	10.0	fold	6.1

TABLE V—GREASEPROOFNESS OF POLYAMIDE RESIN SUSPENSOID A-000

Coating	Ream Weight	Flat or fold	Penetration time (seconds)
None	—	flat	2
Unfused	17.0	flat	133
Unfused	18.0	fold	28
Fused	8	flat	1,800+
Fused	8.5	fold	2,280

ards T-454-m-44 were used. The results are indicated in Tables IV and V, where the grease and water-vapor resistance of the fused coatings are plainly demonstrated. For all of these tests, 23-lb. cereal glassine was used.

All of the compounded suspensoids exhibit greater greaseproofness than does the A-000 composition. Their water resistance is somewhat decreased, but experimental compositions with greatly enhanced water resistance have been devised for specific purposes.

Plasticizers may be added to polyamide resin suspensoids in the form of nonionic or cationically stabilized

dispersions or as solutions. (They may also be incorporated at the time the suspensoid is made.) Many liquid plasticizers, on the other hand, may be added directly with vigorous stirring. For some of these, an aging period of one week is desirable. The liquid plasticizers which have thus far been added are listed in Table VII. In all of these tests, 32 grams of plasticizer were used per 100 grams of suspensoid. As mentioned, polyamide resin suspensoid films are composed of minute particles. Continuous films result from heat fusion (200-250 deg. F. for 5-30 min.), from the addition of certain plasticizers (Sanitizer 8 or tributyl phosphate) or from the addition of certain solvents. Water-miscible solvents such as methanol, ethanol, isopropanol, ethylene glycol and glycerol, as well as low-boiling solvents such as ethyl ethers, may be added directly to the suspensoid with vigorous stirring. The degree of continuity obtainable with solvents is indicated in Table VI.

Compounding

Of direct importance to packaging is the compatibility of polyamide resin suspensoid with a wide variety of emulsions, latices and resin dispersions. The suspensoid is compatible, without any modification whatsoever, with polyvinyl acetate emulsions, various acrylic resin dispersions and with cationic latices such as Neoprene RCD-1097 (DuPont) and Hycar Latex OR-25 (Goodrich). It serves to plasticize these materials, to reduce their tack very appreciably and to

TABLE VI—EFFECT OF VARIOUS SOLVENTS ON THE CONTINUITY OF POLYAMIDE RESIN SUSPENSOID FILMS

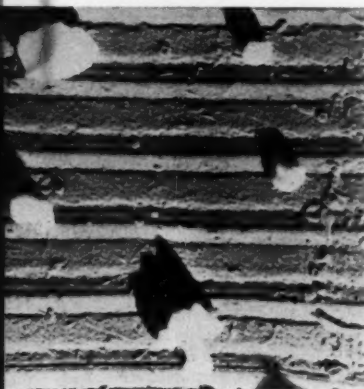
Solvent	Degree of continuity
Butyl alcohol	Complete
Butyl cellosolve	Complete
Cyclohexanol	Complete
Methyl isobutylcarbinol	Complete
Cellosolve	Partial
Dioxane	Partial
Carbon tetrachloride	Partial
Cyclohexanone	Partial
Xylene	Partial
Diacetone alcohol	Partial
Ethyl ether	Partial
Isopropyl ether	Partial
Ethylene dichloride	Partial
Turpentine	Partial
Isopropyl alcohol	Partial
Ethyl acetate	Slight
Butyl acetate	Slight
Mineral spirits	Slight
Ethyl alcohol	Slight
Skellysolve E	Slight
Acetone	Slight
Methyl ethyl ketone	Slight
Chloroform	Slight
Toluene	Slight
Benzene	Slight
Glycerol	None
Skellysolve A	None
Skellysolve T	None
Carbitol	None
Ethylene glycol	None
Mineral oil	None
VM & P naphtha	None
Nitropropane	None

lower their heat-sealing temperature. To wet-stick adhesive formulations based on latices and resin emulsions, it imparts water resistance. With its charge reversed, the suspensoid is also compatible with anionic dispersions such as natural and many synthetic rubber latices.

A great variety of solid modifiers, such as rosin esters, polyisobutylene and phenolic and other resins, may be added to the suspensoid as solutions in organic solvents. Butanol or mixtures of butanol and toluene are preferred solvents, and in making the addition, it is often helpful to heat the suspensoid.

Pigments may also be added to the suspensoid to produce decorative coatings.

The polyamide resin suspensoids, like their predecessor, polyamide resins, have made a definite niche for themselves in the packaging industry. Today, development chemists, using the suspensoids to solve many difficult and unique problems, are rapidly expanding that niche.



TINY PARTICLES of polyamide resin "floating" in water in suspensoid form are revealed in this photograph taken with an electron microscope. The particles here are magnified 7,000 times.

TABLE VII—PLASTICIZERS FOR GENERAL MILLS POLYAMIDE RESIN SUSPENSOID A-000

Plasticizer	Supplier	Compatibility			Film properties		Appearance
		Initial	24 hrs.	7 days	Initial drying*	Residual tack	
Dimethyl phthalate	---	Good	Good	Good	2 min.	None	Smooth
Dibutyl phthalate	---	Good	Good	Good	2 min.	None	Smooth
Diocetyl phthalate	---	Good	Good	Good	2 min.	None	Smooth
Tricresyl phosphate	---	Good	Good	Good	1 min.	None	Smooth
Dibutyl sebacate	---	Good	Good	Slight settling	½ min.	None	Smooth
Flexol 3 CF	(C&C)	Good	Good	Good	½ min.	None	Very smooth
Flexol 3 GH	(C&C)	Good	Good	Good	½ min.	None	Very smooth
Flexol 3 GO	(C&C)	Good	Good	Good	½ min.	None	Very smooth
Flexol R-1	(C&C)	Good	Good	Good	20 min.	Yes	Difficult to coat
Flexol R-2	(C&C)	Slight settling	Slight settling	Slight settling	20 min.	Yes	Difficult to coat
Flexol TOF	(C&C)	Slight settling	Slight settling	Slight settling	4 min.	Very slight	Grainy
AE-1	Monsanto	Incompatible	---	---	---	---	---
HB-40	Monsanto	Good	Good	Good	2 min.	Slight	Grainy
Santicizer 140	Monsanto	Poor	Poor	Settles	½ min.	None	Grainy
Santicizer 141	Monsanto	Good	Good	Good	½ min.	None	Fairly smooth
Santicizer 8	Monsanto	Good	Good	Slight settling	10 min.	Yes	Continuous
Santicizer 160	Monsanto	Slight settling	Slight settling	Slight settling	½ min.	None	Fairly smooth
Santicizer B-16	Monsanto	Slight settling	Slight settling	Slight settling	1 min.	None	Powdery
Santicizer M-17	Monsanto	Slight settling	Slight settling	Slight settling	1 min.	None	Grainy
Paraplex G-40	American Cyanamid	Slight settling	Slight settling	Settles	---	---	Difficult to coat
Paraplex G-50	American Cyanamid	Slight settling	Slight settling	Slight settling	---	---	Difficult to coat
Paraplex RG-8	American Cyanamid	Good	Good	Good	---	Yes	Difficult to coat
Paraplex RG-2	American Cyanamid	Incompatible	---	---	---	---	---
Harflex 260	Hardesty	Good	Good	Good	½ min.	None	Smooth
Harflex 45	Hardesty	Good	Good	Good	1½ min.	None	Grainy
Armeen 12D	Armour	Incompatible	---	---	---	---	---
Castor oil	---	Good	Settles	Settles	½ min.	None	Grainy
P-6	Baker	Good	Good	Good	1 min.	None	Grainy
GP-261	Goodrich	Good	Good	Good	2 min.	Very slight	Grainy
Hercoflex	Hercules	Good	Good	Good	4 min.	None	Grainy
Indopol L-10	St. Oil of Ind.	Good	Good	Fair	2½ min.	None	Grainy
Lindol	Celanese	Good	Good	Good	2 min.	None	Grainy
Panaflex BN-1	Pan Am. Ref. Corp.	Good	Good	Good	1 min.	Slight	Grainy
173-16	Pitt. Plate Glass	Poor	Poor	Settles	2 min.	Slight	Grainy
Plastolein 9070	Emery	Good	Good	Good	½ min.	None	Fairly smooth
Synvaren	Synvar	Incompatible	---	---	---	---	---
Tetrapropylene	Enjay	Good	Good	Good	½ min.	---	Fairly smooth
Tributyl phosphate	---	Good	Good	Good	2½ min.	Yes	Continuous
Triphenyl phosphite	---	Incompatible	---	---	---	---	---

* Initial drying is defined as the "dry to touch" time under standard laboratory conditions.

New data on cherries

DEPARTMENT OF AGRICULTURE STUDIES COMPARE PERFORMANCES

OF VARIOUS FILMS IN FRUIT PRE-PACKAGING.

By Fisk Gerhardt and Glenn Lindell*

Consumer packaging of Northwest sweet cherries has received an increased amount of commercial attention and experimentation in recent years. Synthetic films are being used as perforated heat-sealed or stapled bags and as partially sealed overwraps of suitable containers. A considerable number of commercial car-lot shipments of film-packaged cherries moved from West Coast points to Eastern markets during the past season. Current studies (2, 3)¹ have shown that fogging and imperviousness to CO₂ and O₂ gases are factors that must be overcome before most of the present plastic films can be used with safety in the merchandising of fresh cherries in sealed packages.

This is a report of certain studies during 1949 and 1950 to find synthetic films that have sufficient transparency, strength and diffusibility to moisture and respiratory gases to prevent fogging and decay and that also preserve the freshness and brightness of cherries without injury to their dessert quality.

Films and packages studied

In one test in 1949 Pliofilms 75FF and 100DW were used in bags of sufficient size to hold 5 lbs. of fruit. Some of these bags were sealed, others were perforated with two 3/16-in. openings (one on each of two facings of each bag) and still others were folded and stapled with an ordinary desk stapler. The 100DW film was also used as a stretch wrap for 1-lb. quantities of fruit. In another test cherries in 1-lb. plastic netted baskets (4% by 4% by 2% in.), Fig. 1, were overwrapped with 300 LSAT cellophane, Kodapak II No. 130 (cellulose butyrate) or Pliofilm 75FF, and sealed.

In 1950 a new Pliofilm FM1 of 80- and 100-gauge thicknesses and a poly-

ethylene 150 (DuPont) film were used. Films were made into bags large enough to hold 4 lbs. of fruit. After packaging, all bags were sealed; some, in addition, were perforated with one 3/16-in. hole on each of two facings of each bag. During this season a limited study was also made of the effect of overwrapping regular 5-lb. commercial gift cartons of Lambert cherries with the FF and FM1 types of Pliofilm. Observations of the fruit were made after holding for six days under simulated shipping conditions. Oxygen and carbon dioxide gas analyses of the atmospheres within the packages were made at daily intervals.

The check, or control, lots of cherries in both years were held in 5-lb. models of the standard glassine-paper-lined 16-lb. wooden cherry lug. Replications of each film and package during both years in which experiments were made were in triplicate.

Source, handling and evaluation

Approximately 60 lbs. of medium-red Bing cherries were harvested on June 21, 1949, and held at 36 deg. F. for two days prior to compositing and sorting out any undesirable fruit. After packaging, the cherries were held at 36 deg. for nine days to simulate transit by freight before they were ex-

TABLE I—OBSERVATIONS OF BING CHERRIES AS INFLUENCED BY TYPE OF PLIOFILM AND KIND OF PACKAGE, 1949

Type of Pliofilm	Type of package	Weight loss ¹		CO ₂ gas in package		Condition, appearance and dessert quality of fruit
		Stems	Fruit	Decay	Percent	Percent
		Percent				
		After nine days at 36 deg. F.				
75FF	Sealed bag	3.4	0.30	0	7.0	Bright, firm, slightly carbonated taste.
	Perforated bag	3.6	0.30	0	0	Firm, darker than sealed bag. Normal flavor.
100DW	Sealed bag	2.1	0.25	0	23.5	Bright, firm, slightly carbonated taste.
	Perforated bag	—	0.21	0	0	Same as 75FF perforated bag.
	Stretch wrap	—	1.20	0	15.0	Similar to same film as sealed bag.
Control	Standard lug	11.0	1.97	0	0	Stems brown, fruit dark, not shriveled. Normal flavor.
		After three additional days at 75 deg. F.				
75FF	Sealed bag	6.8	0.65	0	25.0	Bright, firm, stems dry, anaerobic taste, flavor destroyed.
	Perforated bag	—	1.21	6.2	0	Brighter than check, firm, stems dry. Normal flavor.
	Stapled bag	—	1.20	12.3	0	Same as perforated sample.
100DW	Sealed bag	7.2	0.81	0	75.0	Bright, firm, stems dry, anaerobic taste, flavor destroyed.
	Perforated bag	8.0	1.36	14.4	0	Brighter than check. Normal flavor.
	Stapled bag	—	1.37	20.3	0	Same as perforated bag.
	Stretch wrap	—	1.80	0	21.0	Same as sealed bag, flavor destroyed.
Control	Standard lug	24.3	4.70	3.8	0	Shriveled, dark, stems dry, brown. Normal flavor.

* Senior Plant Physiologist and Agent, respectively, Division of Fruit and Vegetable Crops and Diseases, Bureau of Plant Industry, Soils and Agricultural Engineering, Agricultural Research Administration, U. S. Dept. of Agriculture, Wenatchee, Wash.

¹ Figures in parentheses identify "References" appended.

² The relative humidity in the 36 deg. and 75 deg. F. rooms was maintained at 85 and 75%, respectively.

aminated. In most instances comparable lots were held at 75 deg. for an additional three days to represent the period of retail marketing.

In 1950 about 200 lbs. of Bing cherries were harvested on July 5 and cooled at 34 deg. for approximately 16 hrs. The fruit was then composited, sorted and packaged, then stored at 36 deg. for 11 days. Representative lots were also held at 65 deg. for additional periods of two and four days to gauge their condition during retail distribution.

During both years fruit from the various test lots was examined for appearance, dessert quality, decay and loss in weight during handling and storage. Carbon dioxide gas in the test packages was measured with a portable Hayes gas analyzer and, in 1950, oxygen also was determined by a "Beckman Model 'D'" instrument which gave instantaneous readings.

Results

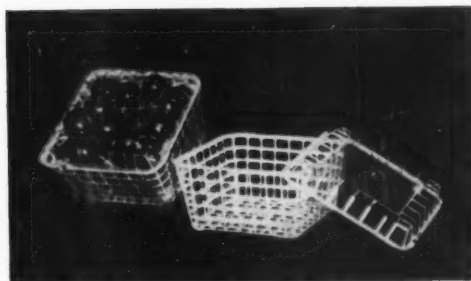
Data relative to the response of Bing cherries to various films in 1949 are summarized in Tables I and II.

Losses in weight of both the stems and the fruit were reduced considerably during storage at 36 deg. F. by packaging in Pliofilm. Perforation of the bag did not result in an increased loss of moisture. Carbon dioxide accumulated in the sealed bags of both the 75FF and the 100DW Pliofilm to 7.0 and 23.5%, respectively, and in doing so, preserved the natural brightness of the cherries to a much greater degree than was possible in the control lots packaged in glassine-paper liners.

While no anaerobic flavor was evidenced in the fruit in sealed Pliofilm bags when removed from 36 deg. F. storage, the fruit did possess a slightly sharp, carbonated taste in which normal varietal flavor was slightly masked. Fruit in the perforated bags was in superior condition to that in the control lots; it also was normal in flavor. Judging from the condition of the cherries, it made little difference whether the fruit was packaged in the FF or the DW type of Pliofilm. If the cherries were to go into immediate consumption following storage at 36 deg. F. for nine days, those lots packaged in sealed bags would be greatly superior to those in the perforated bags and also to the control lots shipped in the standard lug.

When the various lots of fruit were held for an additional three days at

1. FOR TEST, the plastic netted basket of cherries overwrapped with FM1 Pliofilm and an empty container with its cover was used.



room temperature (75 deg. F.), as might happen in retail merchandising, flavor was completely destroyed by packaging in the sealed bags of either film. If holding of the fruit at room temperatures is anticipated, only perforated bags of either FF or DW Pliofilm should be used. While the fruit in the perforated lots was superior in appearance to that in the checks, it possessed a considerably greater amount of decay, probably because of a more humid environment (Table I).

Data on the packaging of cherries

in 1-lb. plastic baskets are shown in Table II. Overwrapping and sealing Kodapak, cellophane or Pliofilm greatly reduced the loss in weight of the packaged fruit. The CO₂ gas concentrations in the baskets and the lack of injury to the flavor of the fruit in the sealed containers indicated that the overwraps were not always completely sealed and gastight.

Fogging was excessive when 75FF Pliofilm or cellophane was used. It usually required about 72 hrs. for the condensed moisture to disappear from

TABLE II—OBSERVATIONS OF BING CHERRIES PACKAGED IN 1-LB. PLASTIC BASKETS, 1949

Kind of sealed overwrap	Weight loss ¹	CO ₂ gas in package	Condition, appearance and dessert quality of fruit
	Percent	Percent	
<i>Held five days at 75 deg. F.</i>			
Kodapak	10.7	3.0	Stems dry, fruit turgid, normal flavor, visibility excellent.
Cellophane	12.5	9.0	Stems light green, fruit turgid, normal flavor, visibility good.
Plioilm	3.9	7.0	Same as cellophane, visibility fair.
Check—none	56.3	0.0	Stems brown, fruit badly shriveled, not marketable.
<i>Held nine days at 36 deg. F.</i>			
Kodapak	3.5	0.0	Stems light green, fruit turgid, normal flavor, visibility excellent.
Cellophane	1.8	1.5	Stems and fruit turgid, normal flavor, visibility good.
Plioilm	0.8	2.0	Same as cellophane, fair visibility.
Check—none	6.1	0.0	Stems dry, normal flavor, appearance poor.
<i>After two additional days at 75 deg. F.</i>			
Kodapak	6.2	3.0	Stems and fruit much superior to check lot, normal flavor.
Cellophane	5.1	4.0	Stems and fruit better than sealed Kodapak, normal flavor.
Plioilm	2.1	4.0	Same as cellophane.
Cellophane ²	9.4	0.0	Considerably superior to check in appearance and condition.
Plioilm ³	8.5	0.0	Same as cellophane-topped lot.
Check—none	13.6	0.0	Stems brown, fruit dark colored, some shriveled, normal flavor.

¹ The relative humidity in the 36 deg. and 75 deg. F. rooms was maintained at 85 and 70%, respectively.

² Top only covered with plastic film.

TABLE III—OBSERVATIONS OF BING CHERRIES AS INFLUENCED BY TYPE OF FILM AND TYPE OF PACKAGE, 1950

Type of film	Type of package	Gas in package after 11 days		Loss in weight		Decay	Appearance, condition and dessert quality of fruit
		O ₂	CO ₂	Percent	Percent		
After storage 36 deg. F. for 11 days							
Pliofilm 80FM1	Perforated	19.5	1.7	0.67	1.02	Brighter than check, firm, turgid, stems mostly green, flavor normal, dessert excellent.	
	Sealed	7.8	2.2	0.75	1.48	Brighter than perforated, firm, turgid, stems mostly green, flavor normal, dessert excellent.	
Pliofilm 100FM1	Perforated	19.4	1.9	0.65	1.72	Same as when Pliofilm 80FM1 was used.	
	Sealed	7.7	3.0	0.40	1.44	Same as when sealed Pliofilm 80FM1 was used, except slightly neutral flavor.	
Polyethylene 150	Perforated	18.0	2.5	0.18	1.58	Similar to both types of perforated Pliofilm.	
	Sealed	7.7	7.6	0.13	0.79	Brightest fruit, firm, turgid, stems best looking, neutral flavor, inferior to check.	
Check	Std. lug	—	—	3.33	2.26	Darkest of all lots, stems mostly dry some brown, fruit soft, flavor normal.	
After an additional two days at 65 deg. F.							
Pliofilm 80FM1	Perforated	14.5	4.0	1.40	7.79	Brighter than check, mostly firm, stems much superior to check, flavor normal, dessert very good.	
	Sealed	4.0	4.7	1.19	7.29	Brighter than perforated, stems and condition like above, no detectible loss of flavor.	
Pliofilm 100FM1	Perforated	13.2	4.8	0.79	7.33	Same as perforated Pliofilm 80FM1.	
	Sealed	5.4	8.0	0.65	5.73	Same as sealed Pliofilm 80FM1 except for distinct loss of flavor.	
Polyethylene 150	Perforated	15.7	5.7	0.19	9.96	Similar to both types of perforated Pliofilm.	
	Sealed	8.4	10.8	0.22	3.33	Brightest of all lots, condition excellent except for distinct loss of flavor, no anaerobic taste.	
Check	Std. lug	—	—	3.97	9.93	Poorest in appearance, stems dry brown, fruit soft, some shrivel, flavor normal.	
After a total of four additional days at 65 deg. F.							
Pliofilm 80FM1	Perforated	14.5	4.0	1.84	18.26	Much brighter than check, firm, not shriveled, stems better than check, flavor like check.	
	Sealed	6.3	4.3	2.15	26.48	Brighter than perforated, stems and condition same as above, slight loss flavor.	
Pliofilm 100FM1	Perforated	14.2	2.8	1.54	31.42	Same as perforated Pliofilm 80FM1.	
	Sealed	5.8	7.3	1.70	32.27	Same as sealed Pliofilm 80FM1.	
Polyethylene 150	Perforated	15.7	5.2	0.76	25.64	Similar to both types of perforated Pliofilm.	
	Sealed	8.6	10.3	0.70	23.16	Brightest of all lots, condition and taste same as sealed Pliofilms.	
Check	Std. lug	—	—	6.59	20.32	Poorest in appearance, stems very dry brown, much shriveled, flavor normal.	

the film surface when the packages were placed in cold storage. Kodapak offered the greatest visibility and made the most attractive overwrap for the plastic baskets. Even topping the baskets with the films resulted in a marked reduction in the weight loss of the fruit. It was the opinion of the writers that the overwrapped plastic basket was a more attractive type of package than the plastic film bag.

The results, during 1950, from packaging sweet cherries in FMI Pliofilm and DuPont polyethylene 150 are given in Tables III and IV. The loss in weight of the fruit in the standard lugs (check lots) during simulated transit and retail conditions was many times as great as that in any of the Pliofilm or polyethylene packages. In

these experiments, as in 1949, perforation had little influence on the loss in weight of the fruit. Among the films, polyethylene offered the most resistance to the movement of moisture from the fruit and Pliofilm 80FM1 offered the least.

During 11 days at 36 deg. F. there was slightly more decay in the check lots than in any of the film packages. In the sealed polyethylene lot, where the CO₂ gas was relatively high (7.6%), decay was least (0.79%). After holding for an additional two days at 65 deg., decay had increased many times over that present at 36 deg. (Table III). Here again decay was somewhat less in sealed bags than in perforated ones; this point is well illustrated in the case of polyethylene,

wherein perforation reduced the CO₂ gas in the package by approximately 50% and the amount of decay was about three times as much. Previous studies (1) have shown that CO₂ in sufficient concentrations will retard decay development in cherries. The rapid diffusion of CO₂ through the Pliofilms in this series precluded much accumulation of this gas; whether the film was perforated or not, decay was quite similar to that in the check lots.

When the previously stored fruit was held for an additional four days at room temperature (65 deg. F.) approximately 20 to 30% of the cherries in all lots of fruit was decayed regardless of the type of packaging. Data in Table III indicate that during the period of simulated retail handling it

would be difficult to state that either the type of film or the kind of package was of much importance in the prevention of decay.

Analyses of the O_2 and CO_2 in the various test packages were made on the second, sixth and eleventh days of storage at 36 deg. F. Because of their similarity to the earlier values, only those concentrations existent on the eleventh day are shown in Table III. In other words, there was no marked variation in the O_2 and CO_2 contents in the packages between the second and eleventh days of storage at 36 deg. No build-up of CO_2 gas was detected.

The FM1 type of Pliofilm is considerably more permeable to CO_2 and O_2 than the 75FF Pliofilm. Past experience in packaging cherries in sealed bags of the latter film indicated that there was sufficient depletion of O_2 and accumulation of CO_2 to destroy the flavor of the fruit through the establishment of anaerobic conditions within the package. Data in Table I show that with the FF and DW types of sealed Pliofilm, CO_2 gas accumulated to 25 and 75%, respectively, in some packages of fruit. In the studies during 1950, permeability of the 80FM1-gauge Pliofilm to CO_2 was so great that even without perforation the ultimate concentration of this gas was not excessive. In the 100 gauge, however, CO_2 retention was greater than in the 80 gauge and perforation resulted in the presence of distinctly less carbon dioxide. According to information released by the manufacturer of Pliofilm, the O_2 diffusion rate is usually approximately one-sixth that of CO_2 for any given type of its films. In the present studies, oxygen diffusion was great enough in all types of sealed films to prevent depletion below approximately 4%, a value probably sufficient to support a nearly normal rate of respiration. Smock (4) has shown that oxygen must be lowered to 2% before the respiration of the apple is reduced to one-third its regular rate in normal air. Perforation, however, did permit a more normal concentration of oxygen in all test packages. Polyethylene 150 was generally more pervious to O_2 and less so to CO_2 than were FM1 Pliofilms of either gauge. In none of the sealed packages, even at room temperature, were the O_2 values below 4.0% or the CO_2 concentrations above 10.8%.

The appearance, condition and dessert quality of each experimental lot of

fruit are described briefly in Table III. When examination was made on the eleventh day of storage at 36 deg. F., fruit in all sealed bags of either Pliofilm or polyethylene was brighter red in color than in the corresponding perforated packages. Fruit in the latter bags was also decidedly brighter in color than that of the control lots. There were no detectable differences in greenness of stem or turgidity of the fruit in the sealed and perforated packages. Stems of these lots were turgid and considerably more green-colored than those in standard lugs; the latter were mostly brown and dry, with only an occasional green stem. In none of the perforated packages was the flavor of the cherries inferior to that of the controls; in sealed 100FM1 Pliofilm and in polyethylene, flavor was slightly impaired. It was not objectionable, but it did lack the full varietal characteristics of the Bing cherry.

When the packaged fruit was held two and four days at room temperature following cold storage, differences in appearance, condition and dessert quality of the fruit developed because of packaging methods. Here again the sealed bags held the brightest fruit, but, with the exception of the 80FM1 Pliofilm, they did so only at the expense of flavor. Fruit from all the perforated packages was far superior to the controls in appearance and, in most instances, in flavor.

None of either the sealed or the perforated bags of fruit had any "off" odors when opened immediately following specific treatments. When freshly bagged fruit was placed in cold storage, only the polyethylene films fogged; in the FM1 Pliofilm containers, visibility of fruit was not

restricted by condensation of moisture.

Observations during these studies and the data presented in Table III indicate that the perforated films of Pliofilm FM1 and polyethylene 150 were decidedly superior to the standard glassine-paper-lined cherry lug for the preservation of the appearance, condition and general dessert quality of Bing cherries. Two $\frac{1}{16}$ -in. perforations per bag were sufficient to make the atmosphere within the bag nearly normal. From these results it is questionable whether the numerous perforations of bags used in the commercial packaging of many fresh fruits are necessary.

Oxygen and carbon dioxide gas concentrations in the overwrapped commercial 5-lb. gift packages are shown in Table IV. These data demonstrate the rapidity with which specific atmospheres are built up in the various packages and the stability of these same atmospheres during continued storage at 65 deg. F., i.e., the lack of build-up of one gas or the other. The 100FM1 Pliofilm maintained the lowest oxygen and highest carbon dioxide level of any of the overwraps. A partial seal with 75FF Pliofilm lowered the normal O_2 level by about the same amount as it increased the CO_2 concentration. The 80FM1 film carried the cherries in an atmosphere of approximately 3% O_2 and 3% CO_2 .

When packages were opened on the sixth day at 65 deg. F., the fruit in all the overwrapped cartons was far superior in both brightness of color and greenness of stems to that in the plain package. There was no abnormal odor present when any of the sealed packages was opened. All lots (This article continued on page 166)

TABLE IV—OXYGEN AND CARBON DIOXIDE IN 5-LB. GIFT BOXES OF LAMBERT CHERRIES AS INFLUENCED BY KIND OF OVERWRAP, TYPE OF SEAL AND LENGTH OF STORAGE AT 65 DEG. F. AND 75% R. H., 1950

Type of overwrap	Type of seal	Oxygen concentration after indicated days					Carbon dioxide concentration after indicated days				
		1	2	3	5	6	1	2	3	5	6
<hr/>											
Percent						Percent					
75FF Plio-film	Partial ¹ seal	14.2	14.5	14.5	14.2	14.0	5.0	6.0	6.0	6.0	7.0
80FM1 Plio-film	Complete seal	3.0	3.2	3.5	4.0	6.0	4.0	3.0	3.0	4.0	3.5
100FM1 Plio-film	Complete seal	2.0	2.2	2.0	1.6	1.6	9.5	9.5	10.0	10.0	10.0
None-check	None	Normal—21.0					Trace only				

¹ The film was carefully wrapped around the cardboard container and sealed along one entire side; the ends were folded and spot sealed just sufficient to hold their original position.

Q u e s t i o n s & A n s w e r s

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 575 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

Labels that strip from kraft

QUESTION: We are anxious to obtain an adhesive suitable for fastening labels to kraft-paper-wrapped packages which will permit us to strip the label off at a later time with minimum damage to the paper wrapping. Have you any suggestions to offer us?

ANSWER: There are two possible solutions to your problem: (1) the use of a peelable adhesive and (2) use of a heat-sealable coating on the back of the label.

It is suggested that for the first method you contact various adhesive companies and obtain samples of adhesive which can be characterized as being peelable. With such an adhesive, you can apply the label and at some future time, it can be removed by a careful peeling action. The adhesive will have excellent resistance to removal by hazards of normal shipping and handling.

By the other method, you would apply a label which has a heat-sealing coating on the back which requires heat to effect the seal. The label could be removed by applying heat to re-fuse the adhesive and then quickly lifting off the label. There are a number of different types of heat-seal paper labels on the market and it is suggested that you try these materials to see which of the two methods will best satisfy your needs.

Packaging fine, hygroscopic powder

QUESTION: We manufacture a product that is used to improve concrete. This material is a fine powder that is hygroscopic. We would like to investigate the best possible means for packaging this powder for distribution. The container will have to be moistureproof and airtight, and we would like to explore the use of three possible containers: (1) rigid, (2) flexible and (3) soluble. The product is used industrially and we are also

interested in over-the-counter consumer use in very small packages.

ANSWER: You state that your product is hygroscopic, but it is necessary to know how hygroscopic and, further, how much moisture can be absorbed before the product is caked or otherwise becomes unusable. Laboratory tests have been developed to determine humidity equilibrium and the moisture tolerance of the product, since these facts must be known before the degree of protection and the kind of materials can be decided.

It would be simpler if the package need not be airtight. Airtightness is only necessary if your product is affected by oxygen or if it contains aromatic materials, the loss of which would affect the product. A package can be made highly moistureproof and yet not be completely airtight.

For the industrial use of your product, you can use glass jars, metal cans, fibre cans or bags. The construction of the fibre can and the bag will depend upon the moisture sensitivity of the product and the time and conditions of storage. Packages of these types can be made with varying degrees of moistureproofness. Your final choice will depend upon the cost limitation, printing requirements, etc., as well as the requirements of the product.

For the consumer-sized unit you will probably find a small bag or envelope using metal foil and heat-seal construction satisfactory if the product is very hygroscopic and the size of the package is very small. However, it is suggested that you obtain samples and costs of various packages and have them examined in your laboratory for the protection they give your product and also make trial shipments before coming to a final decision. Your laboratory should also determine the essential characteristics of your product, since this will simplify your search for the optimum package for your requirements.

Heat sealing cellophane and paper

QUESTION: We have a supply of plain cellophane which we would like to use to extend our supply of packaging materials. The package in question is fabricated by heat sealing of cellophane to paper. Is there any way to coat the paper or otherwise heat seal the paper and cellophane together?

ANSWER: Plain cellophane can be heat sealed to a limited number of other materials to form seals of excellent strength and durability. However, the number of materials that will heat seal to uncoated cellophane is quite limited. There are a number of lacquer formulations that can be applied to paper which will effect a satisfactory seal. For maximum efficiency in the use of the lacquer coating, paper should be well finished and preferably be a clay-coated paper or a glassine type for papers with such surfaces. A coating of from 4 to 6 lbs. per ream should make a strong heat seal.

The important consideration is the formulation of the lacquer. Resins based on rubber modifications have proved particularly effective. It is suggested that you have samples of your paper coated with a variety of different lacquer formulations, being sure that each sample carries a continuous surface film of the coating. You should then make up sample seals on your equipment to determine the conditions necessary for effecting a strong seal, remembering, however, that many of the samples will show very poor or even no seal at all.

It will also be necessary to examine those seals after they have aged for three or four days even though they appear strong when they are made. In some cases you will find that a lacquer formulation will show good initial seal strength, but the seal will deteriorate after aging a few days.

FOR SALE!

One (slightly used) Crystal Ball

Not a bad crystal ball . . . as crystal balls go . . . but lately it has a habit of getting cloudy when we need it most. For instance: take the case of VISQUEEN* film.

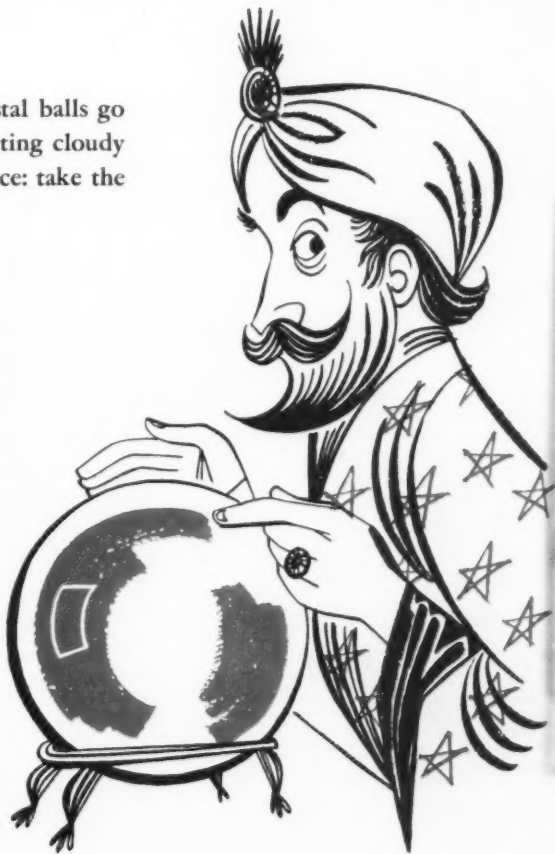
As you probably remember, VISQUEEN film was originally developed for the specific use of the armed forces. What they wanted was a polyethylene film such as had never been seen before . . . strong, durable, chemically inert, flexible and all the other qualities you know so well . . . a film that would meet rigid specifications yet be economical to use. *They got it!* And now, like many another reserve . . . VISQUEEN film is being called back to active service.

And that's our problem. While our Defense requirements get bigger and bigger . . . our customers delivery will of course dwindle. So we searched our crystal ball. And the only thing we could find is that we will have to ask you to please be patient . . . we're working hard, and we'll work harder to make every effort to fill your orders. You may be cut down . . . but we promise we will do the best we can to get VISQUEEN film to you.

*T.M. The Visking Corporation

VISQUEEN Film . . . A Product of
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April 19

See the newest developments
in Polyethylene packaging at
Booth 573

National Packaging Exhibition
Atlantic City

Equipment and materials

EMERGENCY SUBSTITUTE METAL CONTAINERS

made in 1- to 5-gal. capacities, designed to take the place of standard I.C.C. lug-cover containers, have been announced by the Vulcan Tin Can Co., Bellwood, Ill. The new containers have

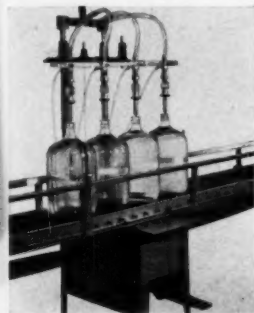


a tinplate body with hand-soldered locked seams; cover and bottom are either of tinplate or clear lacquered blackplate. Lug covers are fitted with either tubular or flowed-in gaskets and employ standard closing tools. Fabricated from available materials, this type of container is offered quite frankly as an emergency and substitute solution to current container-short-

age problems. It is slightly more expensive than standard I.C.C. containers. Developed and widely used during World War II, the container was found to be quite satisfactory for heavier and semi-solidified substances. It is not recommended, however, for thin liquids. Carload or trailerload lots are still available, the manufacturer reports, although I.c.l. shipments are limited to the Chicago area.

A NEW 5-GAL. FILLING MACHINE WITH CONVEYOR

designed for use with either bottles, jugs or cans is being offered by the Perl Machine Mfg. Co., 68 Jay St., Brooklyn, N. Y. The new machines are available in a wide range of sizes and models, with from two to eight automatic filling valves and with conveyors 6 to 15 ft. long. Suitable for filling by either gravity, vacuum or pressure, the machines can be supplied either semi-automatic, requiring but one un-



skilled operator, or fully automatic, requiring no operator at all. The manufacturer claims absolutely uniform and accurate filling levels are assured in all containers with micrometer screw adjustments. Foaming is said to be reduced to a minimum and an automatic shut-off prevents

dripping. Instead of the overflow starting simultaneously with the actual filling, it starts only after the desired level has been reached, a feature which is said to result in considerable savings. A special pneumatic pump to raise and lower the filling head with the valves makes for easier operation than the customary foot pedal. The machines can be supplied with either vacuum or gravity filling, as well as for both vacuum and gravity filling.

TWO NEW SPECIALIZED PLASTIC-FILM TAPES

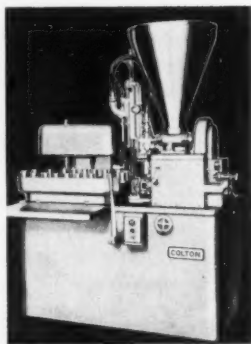
for the food and chemical industries have been announced by the Minnesota Mining & Mfg. Co., 900 Fauquier St., St. Paul 6, Minn. Both tapes—"Scotch" brand pressure-sensitive tape No. 480 (polyethylene film) and No. 490 (saran film)—are designed for special package and bottle-sealing jobs and are recommended for products requiring a low water-vapor-transmission rate. The polyethylene tape is reported to have a maximum elongation of 700% and excellent low-temperature flexibility; its backing is resistant to a wide range of solvents. It is available only to firms

holding defense contract priorities and comes in 36-yd. rolls, $\frac{1}{8}$ - to 22-in. wide, transparent only. The saran tape includes additional advantages of excellent sheen, availability in various colors on special order and excellent conformability with a thin 0.002-in. backing thickness. It has WVT rate of 0.15 gr./100 sq. in./24 hrs.; is made in $\frac{1}{8}$ - to 18-in. widths in 36-yd. rolls and is available through jobbers nationally.

AN AUTOMATIC TUBE FILLER AND CLOSER

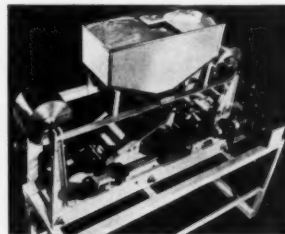
claimed to achieve unusual speed, precision and economy in filling tubes with creams, pastes, powders and liquids has been announced by Arthur Colton Co., Division of Snyder Tool & Engineering Co., 3400 E. Lafayette Ave., Detroit 7, Mich. Known as the Colton No. 175 Automatic Tube Filler and Closer, the machine comes in four models—Standard Single, Standard Twin, Special Single and Special Twin—covering a range of tube sizes that is said to meet practically every tube-filling requirement.

The Standard Single has a capacity of 55 tubes per minute, $\frac{1}{8}$ to $1\frac{1}{2}$ in. in diameter by $7\frac{1}{4}$ -in. long. Standard cylinder capacity is 7 fluid ounces. The machine is powered by a 1 h.p. motor. Standard Twin has a capacity per minute of 85 tubes up to $\frac{1}{8}$ in. in diameter by $7\frac{1}{4}$ -in. long. The automatic work cycle, starting after the tubes are placed in vertically-mounted tube holders, moves the tubes to a filling head where they are filled from the bottom up (to prevent air in pockets) with an exactly metered quantity of material from a 15-gal. hopper. Tubes then pass to the closing and crimping stations which produce the quadruple fold Colton clipless closure. The entire operation is said to be so clean that it is unnecessary to wipe the tubes before packing. Code-marking jaws are supplied on request at no extra cost. All parts are easily accessible for cleaning and for change-over to different tube sizes.



A NEW UNIT-PACKAGING MACHINE

that prints, forms, fills and hermetically seals the package in one continuous, automatic operation is said to provide product protection, extreme accuracy of fill and unusually low production costs. Called the Heco-Packer, this machine was invented by George Holmes, president of the firm which manufactures it—the Holmes Equipment Corp., South San Francisco, Calif. Basic



materials of the package are two roll-fed ribbons of heat-sealing aluminum foil, although the machine can be used with one roll of foil and another roll of transparent film such as Pliofilm, heat-sealing cellophane or polyethylene. The resulting container is in effect, a flexible foil



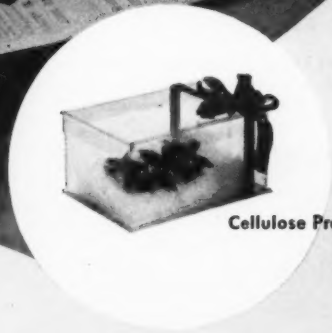
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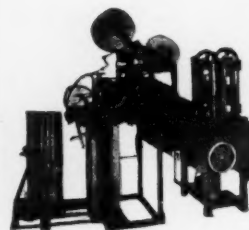
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HERE'S THE ANSWER TO YOUR CARTON PACKAGING PROBLEMS

If you are trying to speed up production, improve accuracy and reduce costs in your packaging department—you will find the machines illustrated below can efficiently do the job.

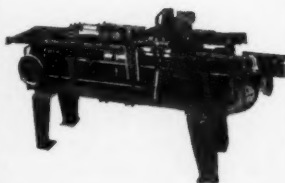
For those who want high speed carton packaging, PETERS offers its "Senior" line of packaging machinery.

Besides the "Senior" models illustrated below, PETERS has available for those with smaller production requirements a "Junior" line of very versatile packaging machines.



This PETERS SENIOR CARTON FORMING & LINING MACHINE EQUIPPED WITH AUTOMATIC CARTON LINER FEEDING DEVICE sets up 60 or more cartons per minute, depending upon size of carton used. Machine is automatic. After cartons are set up, they drop onto a conveyor where they are carried to be filled.

This PETERS D & W TYPE SENIOR CARTON FOLDING & CLOSING MACHINE closes 60 or more cartons per minute, depending upon size of carton used. Fully automatic, no operator required. The packages enter the machine on conveyor belt as open, filled cartons and leave the machine completely closed, ready to be packed for shipment or to be conveyed into a wrapping machine.



Send us samples of the various cartons you are now using. We will gladly forward specific recommendations.

PETERS MACHINERY COMPANY

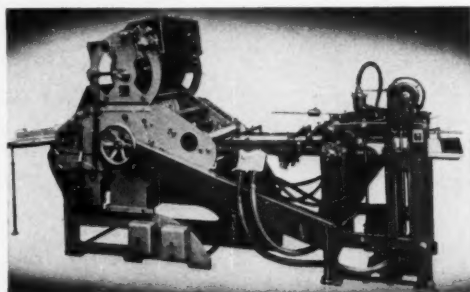
GENERAL OFFICE AND FACTORY

1700 RAVENSWOOD AVE. CHICAGO 40, ILL.

Equipment and materials

"sandwich" with the product contained in as many separate, heat-sealed unit cavities as desired. One of the first users of the Heco-Packer was Willat Production Co. for packaging cold permanent wave neutralizer, which consists of two chemicals that must be kept away from moisture—and each other—until mixed with water by the beauty operator. The package is actually a two-in-one container; both chemicals are held separately in different portions of the packet. To do this, the machine was tailored to the product. The master roller die—which forms the carefully computed unit cavities in the foil sheet—and other attachments were planned for two product cavities. A divided hopper and filling system was also designed. Where powder dosages are concerned, the company claims its machine will control accuracy of fill to a tolerance of 1% in exact volume or weight. Similar accuracy, it is said, can be maintained through magazine feeds for non-free-flowing products such as tablets.

A BRITISH NUMBERING AND PERFORATING MACHINE now available in the United States, suitable for label use and particularly recommended for the pharmaceutical industry, is said to handle sheets up to 23 in. square at a speed of 3,000 sheets per hour. Its simplicity of design enables the use of un-



skilled labor rather than a pressman. Savings from use of the Halley rotary press are reported at 50 to 66% over present methods. The machine is available either for hand or automatic feeding. Up to 96 numbering boxes may be used per sheet. Numbers can be repeated practically any number of times; numbers can be skipped up to a four-skip without skipping wheels, the change being made in a matter of moments. Sole importer for the East is Marac Machinery Corp., 1819 Broadway, New York 23; for the Midwest, Type & Press of Illinois, Inc., 3312 N. Ravenswood Ave., Chicago.

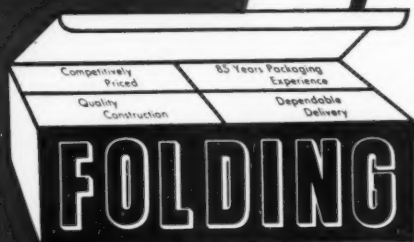
A NEW THERMOPLASTIC LABEL ACTIVATOR

that is said to provide efficient labeling of short runs and also fits into long-run production set-ups has been introduced by the Potdevin Machine Co., 1285 38th St., Brooklyn, N. Y. The



machine activates delayed tack pre-coated labels quickly and evenly, the manufacturer reports, and delivers them to the operator for application to the product. Being motor driven, it permits feeding of labels in any quantity desired to supply one or more operators. Correct heat is maintained by a thermostatic control. Its small size makes it convenient for moving to any desired plant location. Moving parts are few, minimizing maintenance. Constructed of heavy-duty metal, the machine comes

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FLEKKIN AL-611

JAN-P-131, Amendment 3
Type I—Class B 5# load limit
Type I—Class D

FLEKKIN AL-111

JAN-P-131, Amend. 3
Type I—Class B 40# load limit
AN-B-20 Type II
All applications under AN-C-67b

Data on construction, put-up,
physical characteristics and uses
obtainable upon application.

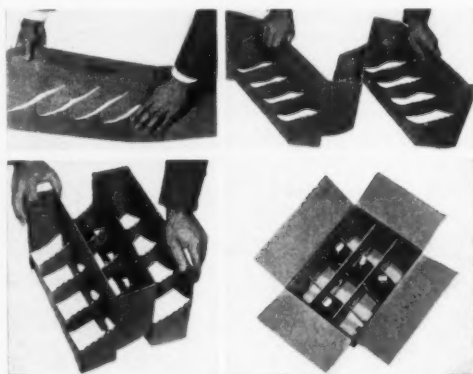


Equipment and materials

in two sizes, 6- and 12-in. widths for 110-volt, 60-cycle, A.C. operation.

CORRUGATED CARTON NESTINGS

designed particularly for use by manufacturers who package their products in glass containers have been developed by Shelton Mfg. Co., Inc., 42-24 Orchard St., Long Island City, N. Y. Advantages of these nestings are said to be economy of cost



and extensive labor savings in assembly. Patents have been applied for on the new design and the company reports it will soon be producing the "Shellnest" in all sizes required by users. The Shellnest replaces the conventional sectional interlocking nests. Being only one piece of board, with special die cuttings and scorings, it quickly folds into a nest with extra cushioning strength in each partition. Glass containers cannot touch each other or the sides of the carton. Stacking space for the new Shellnest is at a minimum, since it lies perfectly flat.

A 32-OZ. POLYETHYLENE BOTTLE

in the standard Boston round shape, designed for heavy-duty use, is now being molded by the Plax Corp. P. O. Box 1019, Hartford 1, Conn.



Illustrated next to the 1-oz. bottle, the new quart-sized Plaxpak bottle is said to be the largest plastic bottle blown in a single piece and uses proportionately twice as much material as the next-largest 16-oz. size.

The new bottle is threaded to accommodate standard 38-mm. 430-finish acid pour-out caps. Thread finishes for other types of standard closures can also be supplied on special order.

The range of Boston round unbreakable Plaxpak bottles now comprises 1-, 2-, 4-, 8-, 16- and 32-oz.

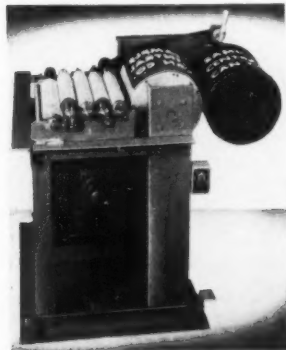
NEW SEMI-NOISELESS ELECTRIC VIBRATORS

of the larger sizes are being offered by the Syntron Co., 250 Lexington Ave., Homer City, Pa. The reduction in operating noise is due to a design change in which the metallic striking parts have been eliminated and rubber bumpers substituted. The new vibrators perform the same function as the standard models, making them especially useful on interior bins, hoppers and chutes where large numbers of employees are working. They

are available in four models with capacities ranging for use on small hoppers containing 20 cu. ft. of material up to bunkers holding many tons.

A PAIL-PRINTING MACHINE

used for printing around the circumference of either 2-, 3- or 5-gal. pails has been brought out by The Industrial Marking Equipment Co., Inc., 7 E. 48th St., New York 17.



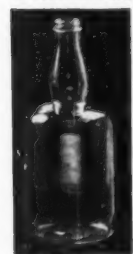
The pail is placed on an expanding mandrel and when the one-revolution clutch is tripped, the pail is printed by means of a rubber die. Ink is applied to the rubber die by means of an ink reservoir and a series of distributing rollers.

Pails can be printed as fast as an operator can load and unload the mandrel, resulting in increased production, savings in time and economy, according to the manufacturer.

A NEW RUBBER PLASTICIZER

said to prolong the life of rubber parts and surfaces is available from the Schwartz Chemical Co., Inc., 326 W. 70th St., New York 23. The product is described as a non-flammable and non-volatile liquid. When applied by cloth or brush to rubber feed rollers, platens, friction wheels, gaskets, etc., it is said to impart the feel, grip, resilience and performance of new rubber. Called "Rub-R-Vive," the plasticizer should interest plant superintendents who face the problem of conserving and lengthening equipment fitted with rubber parts.

A NEWLY DESIGNED HALF-GALLON BOTTLE



is being offered to the food industry by the Latchford-Marble Glass Co.

Developed at the company's main plant at 7507 S. Roseberry Ave., Los Angeles, the distinctive design is featured by graceful expansion of the bottle neck just above the shoulder.

The new glass container is said by the company to be particularly well adapted to the packaging of vinegar, fruit juices and syrups.

Manufactured from an exclusive design, this bottle is now a stock item at Latchford-Marble.

A NON-OSCILLATING RE-WIND UNIT

designed for use with various types of web-processing equipment where material must be re-rolled under controlled tension has been announced by the Ford Instrument Co., 31-10 Thomson Ave., Long Island City 1, N. Y. This new Sperry Re-wind will handle cellophane, paper, heavy board stocks and lighter gauges of sheet metals. Finished rolls of diameters up to 44 in. are wound at high speed without oscillation, the company reports. Power for winding is supplied by a constant-speed electric motor with variable-speed hydraulic drive units under dancer control. The re-wind roll is driven hydraulically at constant deceleration to compensate for the uniformly increasing diameter of the roll. A second, small, variable-speed drive controls the stroking of the variable displacement main pump to achieve the required constant deceleration. The dancer acts to maintain web tension. Re-wound rolls are said to be uniform in density and free of the danger of telescoping.

MARCH 1951

ENGINEERED for Automatic Packaging



APPLICATION.....Series No. 1
Comprehensive protection
of foodstuffs.



CANDIES COOKIES
CAKE MIXES
SOLUBLE COFFEE
MALT PRODUCTS
DEHYDRATED SOUPS
CONCENTRATED & FROZEN JUICES

ACMEFLEX properties: Hermetic heat sealing. Extremely low moisture vapor transfer. Inexpensive. Printable. Inert, non-toxic. Protection against light, loss of flavor, contamination. Sterilizable after packaging. Odorless and tasteless. Very high ratio of seam and body strength to weight.



Plants and people

Peters Machinery Co., manufacturer of automatic packaging and special bakery equipment, announces the election of **H.**



Greene

Lyle Greene as president. He succeeds the late **H. Kirke Becker**. Mr. Greene was formerly president of the **J. L. Ferguson Co.**, packaging machinery manufacturers, and the past year has headed his own package machinery sales company in Chicago.

A director of the Packaging Institute, Mr. Greene is a former officer and director of the Packaging Machinery Mfrs. Institute.

Announcement has been made of the expansion of the plant of **Dominion Foils (Canada), Ltd.**, suppliers of aluminum foil, at Cap-de-la-Madeleine, Quebec, Canada. The plant now employs over 600 people and operations are on a continuous three-shift basis. In addition to coloring

storage space, production-line flow designed for maximum efficiency and two-track shipping facilities. A greatly enlarged Package Research Department is being developed for greater technical assistance to customers and an extensive program to keep Chippewa salesmen up to date on packaging methods and techniques is under way, the company reports.

The Sullivan Heat Sealing Equipment Co., Philadelphia, has appointed the **Miller Wrapping & Sealing Machine Co.**, 18 S. Clinton St., Chicago, as distributors for the Midwest; **Amsco Packaging Machinery Co.**, 31-31 48th Ave., Long Island City, N. Y., as distributors for Eastern United States; **Phin Sales Co.**, 18 Dickens Ave., Toronto, Canada, as distributors for Canada.

The following additions have been made to the sales organization of the **Benj. C. Betner Co.**, Devon, Pa., all of whom were

ations under **L. K. Hanson**. Mr. Bischoff will be located at the corporation's headquarters at Mount Vernon, Ohio, where he will also manage the interplant and export departments.

United Board & Carton Corp., Syracuse, N. Y., recalled staff designers from the four carton plants for a week's refresher course in carton design. In anticipation of probable Government control of paper-board production, the program was aimed at developing new designs requiring a minimum amount of stock.

With the addition of two rotogravure presses and expanded printing operations at Lockland, Ohio, **Gardner Board & Carton Co.** has created the new post of foreman of ink departments. **William E. Biedenbender**, ink technician with Gardner for the past 10 years, has been named to the new post.

F. R. Plum, director of sales for the bakery division of **American Machine & Foundry Co.**, New York, has announced the appointment of **George A. Kihn** as sales representative in Texas, Oklahoma, Arkansas and Louisiana.

West Virginia Pulp & Paper Co. has announced the appointment of **Edward H. Petrick**, who has been in charge of the firm's liner-board sales, as general sales manager. The position was recently vacated by **Wiley L. Jennings** upon his election as vice president in charge of sales.

Advance Mounting & Die Cutting Co., Inc., is now located in new quarters at 445 W. 31st St., New York.

The Baltimore sales office of the **Crown Can Co.** has been moved to the Munsey Bldg., Calvert and Lafayette St.

The Howard Flint Ink Co., Detroit, announces the opening of a New York office at 92 Liberty St., under the supervision of **G. A. Miller**, the firm's New York representative.

The recent purchase by **Minnesota Mining & Mfg. Co.**, St. Paul, Minn., of a 114-acre tract in southwest Chicago is part of a long-range industrial development program, the company has announced. A \$3,000,000 plant now under construction for **Mid-States Gummed Paper Co.**, a MMM subsidiary, is the initial project in the program. That plant is scheduled for occupancy in September.

The Strobridge Lithographing Co., Norwood, Ohio, has announced the retirement



aluminum foil in gauges from 0.0035 up to 0.005 in., the firm has capacity for solid glue mounting, glue lining, waxing and embossing. **Dominion Foils'** volume of trade, the company reports, is divided approximately half for the domestic Canadian market and half for world markets.

The new, enlarged Chicago plant of **Chippewa Paper Products Co., Inc.**, will be ready for occupancy this spring. The new quarters will be equipped with up-to-date production machinery, ample

formerly associated with the **Thomas M. Royal Co.**: **E. V. Ballard**, metropolitan New York sales manager and assistant to **B. C. Betner, Jr.**, vice president; **R. George Buchanan, Jr.**, sales manager of the Flavotainer bag sales and specialty items at the home office in Devon; **J. Ackert** and **J. Rex**, metropolitan New York City representatives; **E. Kassing** and **W. Gilmore**, Midwestern representatives, with headquarters in Chicago; **B. Dickinson**, Southeastern representative, with offices in Atlanta, Ga.

Potdevin Machine Co., Brooklyn, manufacturer of packing and sealing machinery, announces plans for construction of a new 100,000 sq. ft. plant at the Bergen County Industrial Terminal, Teterboro, N. J. All manufacturing of the company's products will be centered in the new building.

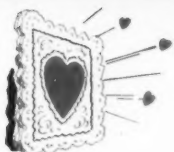
Shellmar Products Corp. has announced the appointment of **Leon Bischoff** as assistant managing director of foreign oper-

We move

MODERN PACKAGING and other Breskin publications are now established in new and larger quarters in the modern office building just completed at 575 Madison Ave., New York 22. The new telephone number is Plaza 9-2710.



PATENTED



**Roses are red
Violets are blue
Displays like this
Make sales for you!**

Here's a "Valentine" that *dealers* love—a clever display packed with tempting Valentine candies. It's a combination sure to brighten any youngster's eye. And *that's* sure to brighten the day's cash register figures! This H & D display is a favorite of manufacturers, too, because it combines a shipping box with an effective point-of-sale display at an over-all saving.

H & D's book, "Pack to Attract" shows dozens of ways better packaging can help you, through better display . . . lower packaging costs . . . increased sales . . . better product protection. For a copy, write Hinde & Dauch, 5103 Decatur St., Sandusky, Ohio.

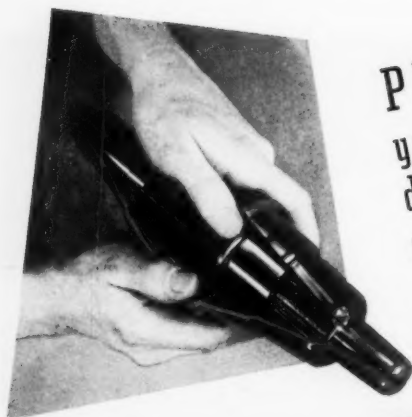


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your product
during both
manufacture
and shipment
with...

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protects and preserves through manufacturing
processes—and during shipment.

Prox-Peel applies a loosely adherent film by
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two types—a molten and a solvent type. Both are
used in Specification* requirements of Army,
Navy, and Air Corps. There are hundreds of civilian uses.

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objects and surfaces through the rigors of manufacture
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WEST COAST REPRESENTATIVE—RAMSELL PRODUCTS, INC., P.O. BOX 532, PALO ALTO, CALIFORNIA

Plants and people

of William H. Merten as president and his election as chairman of the board. Other elected officers are: **James G. Stobridge**, president; **Harold A. Merten**, vice president and general manager; **Frederick W. Betz**, treasurer; **Bernard Ungar**, secretary and sales manager.

R. Smith Schenk, executive vice president of the **Sun Tube Corp.**, Hillside, N. J., has



R. S.
Schenk
(left) and
J. D.
Martin.

been elected president of the company. He succeeds **R. R. Leonard**, who has resigned for reasons of health. Mr. Schenk has been with Sun Tube for 26 years. **Joseph D. Martin**, vice president, has been elected to the company's board of directors and heads all phases of production. **E. Payson Fairchild**, who has been with Sun Tube since 1935, has been appointed vice president and will be in charge of tube and shell sales, as well as advertising.






Col. James V. Demarest, USAR, former executive officer of the New York Quartermaster Procurement Agency, has been appointed special consultant to The Quartermaster General of the Army, with offices in the Empire State Bldg., New York. Col. Demarest will assist The Quartermaster General in the expediting of Quartermaster Corps procurement.

T. R. Mangelsdorf has been appointed sales manager of the Omaha Sales Division of **Bemis Bro. Bag Co.**

Harry A. Legge and **Herman W. Santen** have been elected directors of **Riegel Carolina Corp.**, a subsidiary of **Riegel Paper Corp.**, New York. Mr. Legge is president and a board member of **Howard Paper Mills, Inc.**, and a director of **Edward Hines Lumber Co.** Mr. Santen is a director of the Howard firm. The Howard Paper Mills will utilize part of the production of the new Riegel pulp mill at Acme, N. C., now under construction.

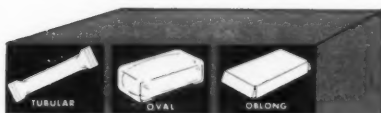
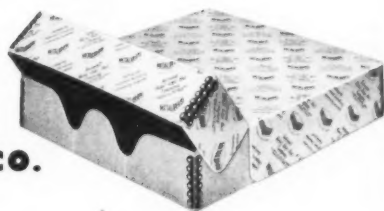
The assignment of **R. J. Stevens** as special representative of the Chicago general

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The Metal Edge Method of Packaging is used profitably  for hundreds of products ... from tools  to turkey  ... from blankets  to auto parts  because it's expertly engineered to your specific production and merchandising requirements.

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Be it large or small,
simple or complex...

WHAT PACKAGING SHAPE DOES YOUR PRODUCT TAKE?



High speed CAMPBELL wrapper packages products of all shapes—

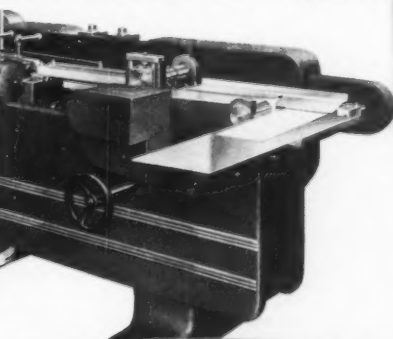
Meats, foods, drugs, cigars, ice cream novelties or machine parts and tools — In fact, most any type product that demands high speed wrapping perfection can be packaged on the Campbell Wrapper. Continuous feed "float" wrapping eliminates product breakage — cuts material costs to the bone. Labor saving — only one operator to feed and one to pack are required on most installations. Heat or glue seals, crimps and folds wrap materials of all types and delivers from

120 to 160 units per minute dependent on product. Let us help you with your packaging problem.

Write for fully illustrated brochure.

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model for
every need



Campbell
WRAPPER

HUDSON-SHARP MACHINE CO. • GREEN BAY, WIS.
Manufacturers

Over 100 Styles to Choose from MOLDED PLASTIC BOXES

No Mold Costs to Pay!

Tell us your requirements—item to be packaged, size needed, hinged or unhinged, transparent or opaque—we will furnish the box.

Our affiliation with 20 molders makes us *headquarters* for packaging in molded boxes. Minimum orders 1000 boxes of a size.

If your order is for a sufficient quantity, we'll design a special box for your product and absorb the mold cost.

IRA HARMON CO.

41 East 42nd Street,

New York 17, N. Y.

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... **Makes ADHESIVES Perform!**



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Now you can buy the PERFECT glue . . . engineered to meet your specific needs!

Our experienced Chemical Engineers study your operations and analyze your requirements. Then they prescribe the EXACT adhesive to do the job, and test it on your equipment and materials.

Corn Belt's "Engineered Adhesives" save thousands of dollars for hundreds of satisfied customers. May we prove that this extra service means extra profits for YOU?

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We specialize in ALL industrial glues:

Phenolic Resins
Urea-Formaldehyde Resins
Liquid and Dry Caseins
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Polyvinyl-Acetate Emulsions
Hot Melts and Thermoplastic
Pick-Up Gums
Dextrine, Starch, and Tapioca
Adhesives
Flexible Animal Glues

Plants and people

sales office has been announced by Chase Bag Co. Harrison B. Rue, in charge of the Memphis sales office, has been appointed Buffalo sales manager. His successor at Memphis will be H. J. Uldricks.

Deane R. Ebey has been named coordinator of defense activities for plastics at The Dow Chemical Co. Mr. Ebey, former supervisor of plastics sales in the company's Los Angeles office, will be located at Midland, Mich., home office of the Dow company. Robert L. Curtis, formerly with the Midland plastics sales division, succeeds Mr. Ebey in Los Angeles.



Ebey

The Heekin Can Co., a pioneer in the can manufacturing business, is celebrating its 50th year of operation under the same ownership and management. The company was founded by James Heekin and today there is a third generation of Heekin men in management. The board of directors for the company's three plants, located in Cincinnati, Ohio, Springdale, Ark., and Chestnut, Tenn., consists of James J. Heekin, chairman of the board; Albert E. Heekin, chairman of the executive committee; Daniel M. Heekin, president; Clarence A. Rolfs, vice president in charge of sales; A. F. Rassenfoos, secretary-treasurer; R. E. Heekin and W. V. Heekin, directors.

James L. Knipe has been named general sales manager in charge of all Union Bag & Paper Corp.'s sales activities. Mr. Knipe has been vice president in charge of cor-



Knipe

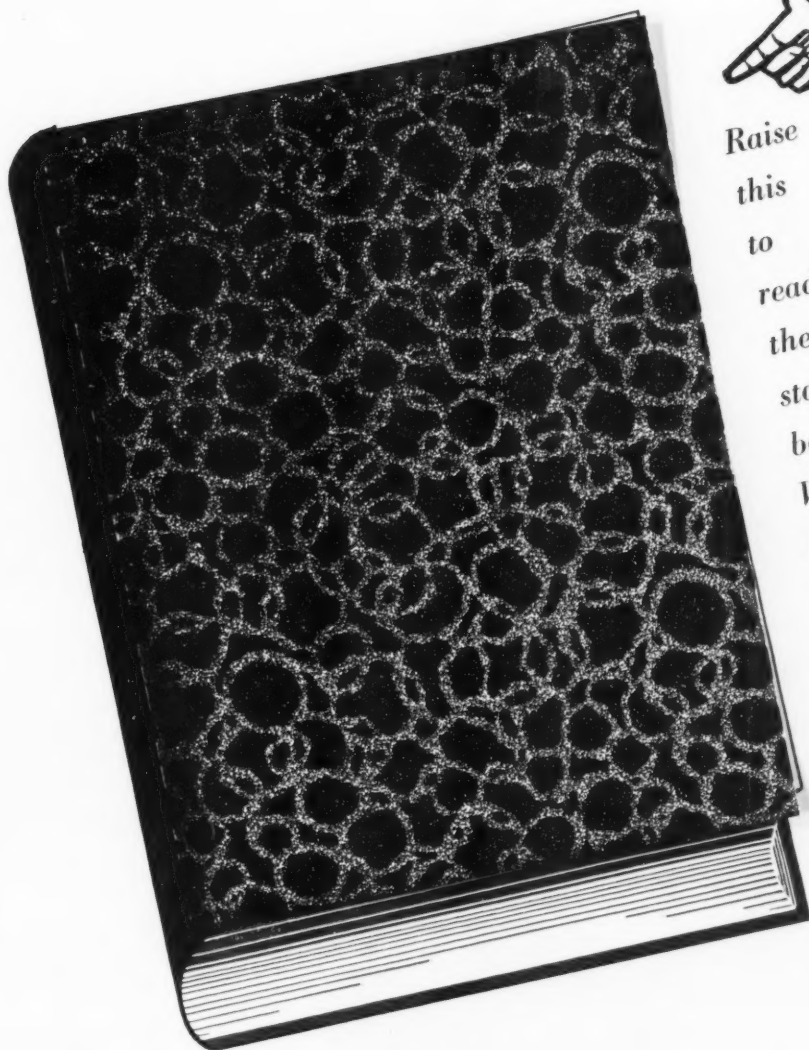
rugated container sales for the last two years and last year was elected to the firm's board of directors.

Two executive promotions have been announced by Marathon Corp., Menasha, Wis., manufacturer of pulp, paper and food packaging materials. Emmett Below, credit man-

ager since 1942, is now the company's controller. Melvin Nield, formerly assistant credit manager, succeeds Mr. Below as credit manager.

Sealright Co., Inc., Fulton, N. Y., announces the creation of a new district organization to cover New York, Western Pennsylvania and West Virginia. Jack LeMessurier, who has been with Sealright for 15 years, has been appointed manager

Venesta Foil Facts – No. 1



Raise
this
to
read
the
story
behind
Venesta
Foil

VENESTA *Aluminium Foil*

VENESTA LIMITED

VINTRY HOUSE, QUEEN STREET PLACE, LONDON, E.C.4
Telephone: CENTral 3060



Over 100 Styles to Choose from MOLDED PLASTIC BOXES

No Mold Costs to Pay!

Tell us your requirements—item to be packaged, size needed, hinged or unhinged, transparent or opaque—we will furnish the box.

Our affiliation with 20 molders makes us *headquarters* for packaging in molded boxes. Minimum orders 1000 boxes of a size.

If your order is for a sufficient quantity, we'll design a special box for your product and absorb the mold cost.

IRA HARMON CO.

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... **Makes ADHESIVES Perform!**



We specialize in
ALL Industrial glues:

Phenolic Resins
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Polyvinyl-Acetate Emulsions
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Flexible Animal Glues

ENGINEERED FOR SPECIAL APPLICATIONS

Now you can buy the PERFECT glue . . . engineered to meet your specific needs!

Our experienced Chemical Engineers study your operations and analyze your requirements. Then they prescribe the EXACT adhesive to do the job, and test it on your equipment and materials.

Corn Belt's "Engineered Adhesives" save thousands of dollars for hundreds of satisfied customers. May we prove that this extra service means extra profits for YOU?

Write today for free booklet.

**CORN BELT ADHESIVES
COUNCIL BLUFFS, IOWA**

Plants and people

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Ebey

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Ark., James J. Heekin, Jr., president; Albert E. Heekin, vice president; Clarence A. Rolfe, in charge of sales; A. F. Rastetter, secretary-treasurer; R. E. Heekin and Heekin, directors.

James L. Knipe has been named general sales manager in charge of all Union Bag & Paper Corp.'s sales activities. Mr. Knipe has been vice president in charge of corrugated container sales for the last two years and last year was elected to the firm's board of directors.



Knipe

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Venesta Foil Facts — No. 1



Raise
this
to
read
the
story
behind
Venesta
Foil

Metal Purity

Commercial aluminium of not less than 99% purity is used in the production of Venesta Aluminium Foil. The remaining 1% is 0.70% iron 0.20% silicon.

Foil of still higher purity (99.8% pure aluminium) and ductility and of equal finish, can also be supplied.

Venesta Aluminium Foil supports neither mould nor bacterial growth. It provides the ideal non-toxic wrapping for the food, chemical and pharmaceutical industries where its unvarying standard of purity is particularly appreciated.

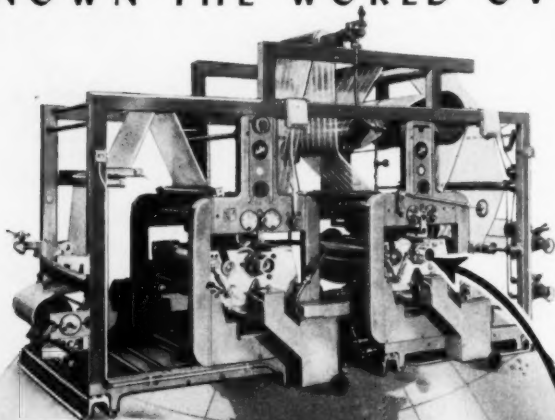
VENESTA *Aluminium Foil*

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KNOWN THE WORLD OVER



The model illustrated has a printing width of 30" and the cylinder circumferences vary from 30" to 40". Press is supplied for one to six colors. Note provision for fusing by heat and water cooled rollers after each printing unit. Also made in 12" and 18" printing widths with cylinder circumferences up to 22".

REMEMBER
THE NAME



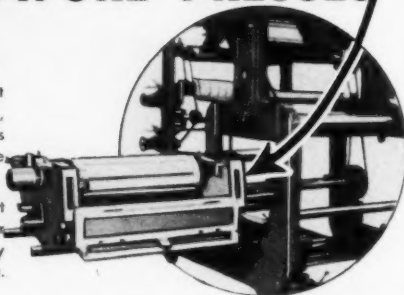
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ROTOGRAVURE PRESSES

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Complete printing unit slides out for easy changing of cylinders, ink and other parts. Shortens make-ready time. Printing pressure controlled by air.

Send samples of your present labels, wrappers, or inserts or specific analysis of what a Halley Rotogravure press can do for you.



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Plants and people

of the new district, with headquarters in Syracuse, N. Y.

The formation of a new company to manufacture paper pan liners for the bakery industry and other packaging products has been announced by two former execu-



*John
Herrick
(left) and
Paul
Thompson.*

tives of Sherman Paper Products Corp. Under the name of **Bestpak, Inc.**, the new company, located at 470 Atlantic Ave., Boston, will be headed by **John Herrick** as president and **Paul Thompson** as vice president and treasurer. Among the products to be manufactured by Bestpak are a new type of corrugated pan liner for Brown 'n Serve rolls and other yeast-raised products, corrugated packaging products for biscuits and crackers, and cushioning materials.



French

Ted French has been appointed manager of the new Industrial Packaging Division of the **Orchard Paper Co.**, St. Louis. The forming of this new department is due to the expansion of VPI paper production and the development of industrial and military packaging materials, the company reports. Mr. French will direct the distribution of Orchard's VPI paper and related industrial packaging papers.

Wray H. Callaghan, general sales manager of the folding cartons division of **Robert Gair Co., Inc.**, has announced the appointment of **John Driscoll** as manager of the New York sales office.

The following are newly elected members of the board of directors of **Allen Cartons, Inc.**, Dayton, Ohio: **J. A. Strong**, chairman of the board of directors of Specialty Papers Co., Dayton; **Donald C. Whipp**, vice president of Peoples Bank, Dayton; Re-elected were: **William H. Allen**, president; **G. A. Robers**, vice president and treasurer; **Henry Biegel**, attorney.

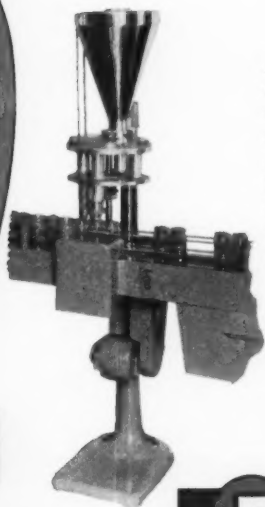
Potlatch Forests, Inc., who have several sawmills in Idaho, have now entered the pulp and paper field as a further step in the diversification of products made from

**FAST
AUTOMATIC PACKING
of
MOST DRY PRODUCTS
IN FLAT BOTTOM
CONTAINERS**

Powders • Nuts • Crystals • Candy
Seeds • Spices • Noodles • Beans
Coffee • Tea • Popcorn
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Automatic
WHIZ-PACKER

(Floor Model)
With The New Conveyor



A combination of filling machine (single or dual set-up) with the new endless belt conveyor. Assured positive, accurate fill with no spillage. Handles wide range of products and container sizes. Scientific agitation prevents clogging in hoppers.

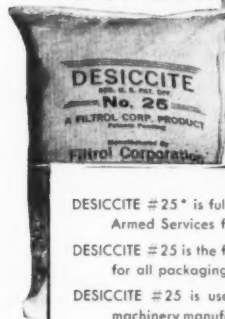
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**PROTECTIVE
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DESICCITE #25* is fully approved by all branches of the Armed Services for use in Method-II packaging.

DESICCITE #25 is the finest dehydrating agent (desiccant) for all packaging requirements.

DESICCITE #25 is used by food, drug, instrument and machinery manufacturers everywhere to eliminate the damaging effects of moisture, corrosion, mold, and rust during shipment, storage and shelf-life.

DESICCITE #25 is immediately available in a wide range of bag sizes through conveniently located distributors.

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MARCH 1951

Department 6

**check the Advantages of Modern
Molded Paper
Containers by *Keiding***



- ✓ The economical substitute for metal, glass, fibre or plastic containers.
- ✓ "Double-Utility" shipping and sales packages for soaps, abrasives, small parts and other products.
- ✓ Attractive designs, lightweight, sturdy, INEXPENSIVE.
- ✓ Available in wide variety of shapes, sizes, or custom designed to your needs.
- ✓ Standard Color, White • Colors also available.
- ✓ Offer valuable re-use advantages in the home—for flowers, bulbs, other uses.

Write for samples
and suggestions.
Tell us your needs.
We will be glad
to submit ideas
and estimates.

Keiding

PAPER PRODUCTS COMPANY

3048 N. Thirty-Fourth St.
Milwaukee 10, Wisconsin

LARGEST MANUFACTURERS OF MOLDED PAPER CONTAINERS

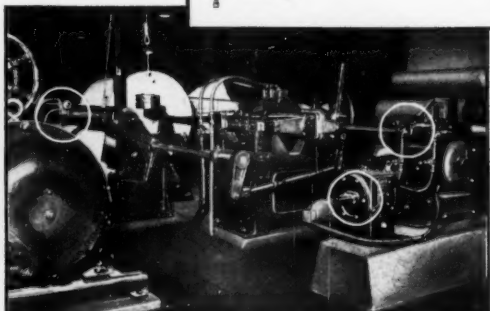
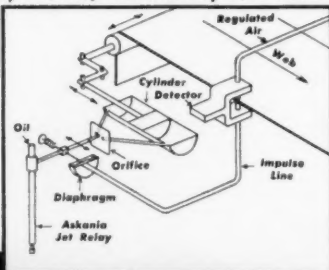
Simple, Economical, Efficient -

ASKANIA HYDRAULIC EDGE POSITION *Control*

for Paper, Plastics, Foils, Textiles, Metals

THE PRINCIPLE

There are three primary elements to the Askania pneumatic-hydraulic system for web positioning control: (1) an air signal sensing nozzle to detect and measure the position of the web; (2) a hydraulic relay (Askania Jet Pipe Regulator) for amplifying the detector signal, and (3) a hydraulic operator that actuates the web positioning mechanism.



THE APPLICATION—An installation of Askania Edge Position Control on a rewriter in a paper mill is shown here. The Jet Pipe regulator, with operator controlling movement of the backstand, is at right. The air signal sensing nozzle on the web can be seen at left.

Askania has taken advantage of the extreme accuracy, ruggedness and dependability of its famed, exclusive Jet Pipe Control Principle in developing this simple, effective method of controlling the position of a moving web. Laboratory tests have shown accuracies within plus or minus .005 inch, and installations have proved effective in a number of varied applications. Field accuracies, of course, depend largely upon the characteristics of the application.

Webs of paper, plastics, foils, textiles or metals can be controlled for wind-up reel, pay-off reel or intermediate guide roll positioning. Forces needed to move positioning mechanisms of any size or weight are easily obtained with the use of proper Askania operators and auxiliary equipment.

Investigate this efficient, economical Edge Position Control for your plant. If you would like further information, ask for Descriptive Paper "A"

See Askania
Edge Position Control
In Action!
Booths 766 and 768



ASKANIA Controls

ASKANIA REGULATOR COMPANY
A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION
254 E. ONTARIO STREET • CHICAGO 11, ILLINOIS

Plants and people

wood. Present plans call for the manufacture of machine-dried pulp, bleached container board, bleached tag stock and unbleached kraft.



Muskat

Triangle Package Machinery Co., Chicago, announces the opening of a new Eastern sales office at 50 Church St., New York, with Walter P. Muskat in charge of sales and service scheduling.

American Type Founders, Elizabeth, N.J., announces the appointment of A. E. Heinsohn, printing machinery and supplies, of Denver, as distributor of its products in the 13 Rocky Mountain area states. The Heinsohn Co. was organized in 1911 to serve printers in that area and plans to establish regional branches throughout the territory.

Inland Lithograph Co., Inc., Chicago, producer of point-of-purchase displays, recently announced the appointment of

John Shaw as vice president. Mr. Shaw has been in the graphic arts field for 19 years and prior to joining Inland was vice president of Einson-Freeman Co., Inc.



Shaw

Ralph Chaffee & Co., San Francisco, manufacturers of heat-sealing equipment, announce the appointment of McDonough Sales Agency, 3362 N. Fair Oaks Ave., Altadena, Calif., to represent them in Southern California.

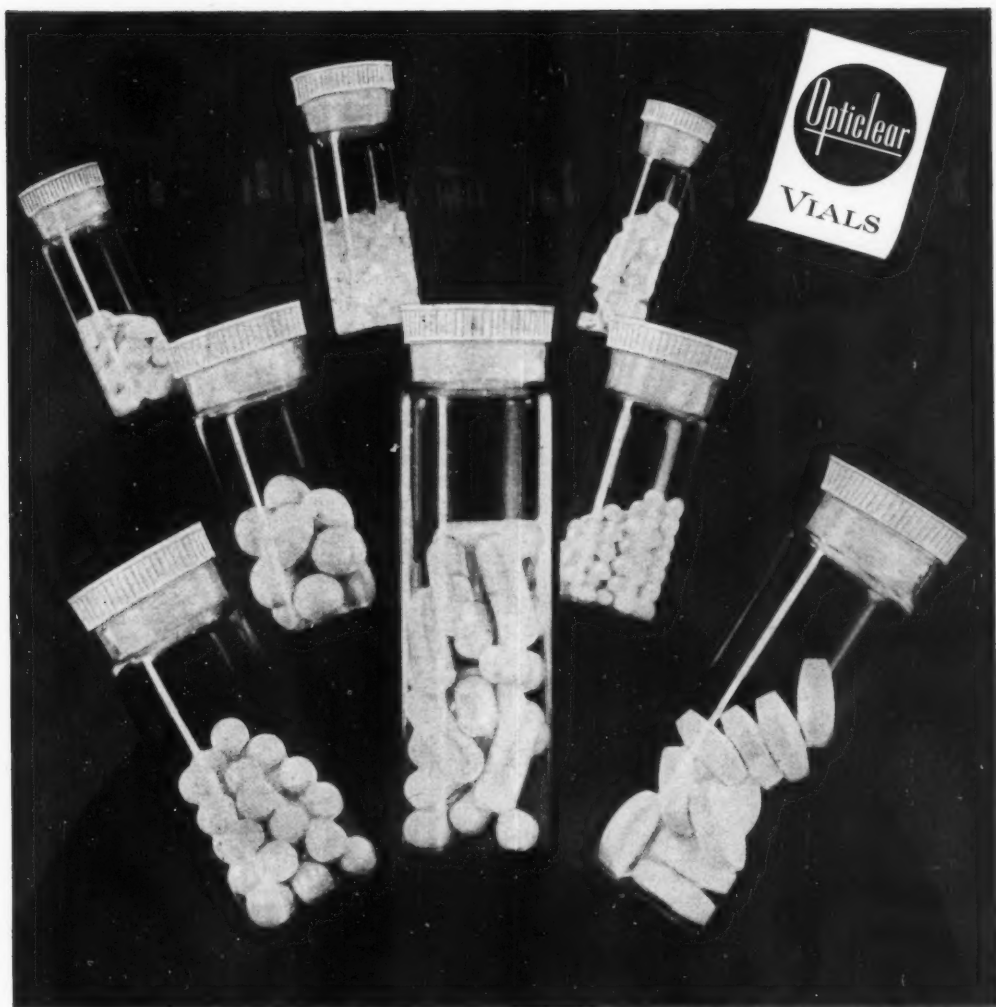
Ernest E. Allison has been appointed general traffic manager of Anchor Hocking Glass Corp., Lancaster, Ohio. Mr. Allison had been with the Pennsylvania Railroad.

The Lord Baltimore Press, Baltimore, Md., announces the appointment of Clarence F. Klein as director of package design and development. Mr. Klein will be available as a technical packaging consultant in the food, liquor, tobacco, cosmetic, candy and other fields.



Klein

General Box Co., Chicago, manufacturer of corrugated and wirebound shipping containers, has announced plans for the construction of a new building in Des Plaines, Ill. The new building will occupy 22,300 sq. ft. of space and will house the



Kimble Opticlear Vials come in eight popular sizes

How to give your product added prestige

Kimble Opticlear Vials with their sparkling clearness, their uniform walls and graceful contours reveal and emphasize the high quality of the products they protect.

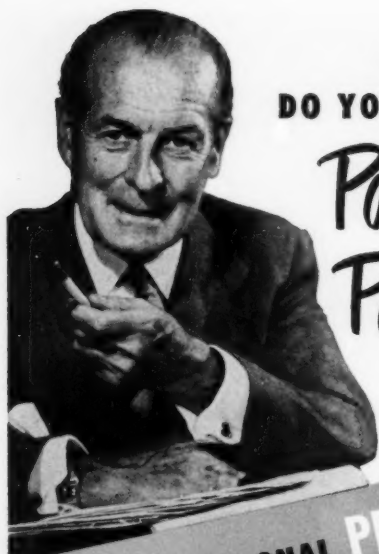
Then too, there are the attractive, new plastic stoppers which seal your product safe from moisture and contamination. Even after these have been removed and replaced repeatedly, re-

seal is quick and positive. Examine some Kimble Opticlear Vials. Tell us sizes and we will send samples.

Specify Kimble for assurance of container quality

KIMBLE GLASS TOLEDO 1, OHIO
Division of Owens-Illinois Glass Company





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Papers?*

HERE'S FUNCTIONAL PROTECTION
that safeguards products in transit or storage

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Thilco HAS IT!

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PAPERS INCLUDE:**

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— All standard types and grades for end-use conversion, including numerous special treatments.
- **Specialty Bags**
— Full paper range, tailor-made to meet any requirement. Printed or embossed decorations.
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— Full range of krafts, asphalt, waxed or polyethylene treated. Printed decorations as desired.
- **Special Treatments**
— Non-staining laminates, rust inhibitors, mold and weatherproof wrappers, and numerous combinations of any papers from the Thilco line.

Providing the proper packaging wrap or bag to safeguard your product is ABC with us — no matter how tough your own specific problem may be. Thilco produces a full range of modern protective papers which may be used "as is" or converted by combining and laminating to perform almost any additional specific function required. In addition, all the extra values of colorful product identity and sales appealing packaging are yours, too, because nearly all Thilco papers can be printed or embossed-decorated — in our own mill. Before you package, consult with us!

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NEW YORK • CHICAGO

Functional Papers FOR PROTECTION THAT COUNTS!

DETROIT • MINNEAPOLIS

THILMANY PAPER CO. • KAUKAUNA • WISCONSIN

*Plants
and people*

executive offices and experimental laboratory; manufacturing will continue to be done at the company's 11 plants.

Milprint, Inc., Milwaukee, Wis., announces the appointment of Roy W. Lundberg, formerly merchandising manager of Milprint's Litho Division, as advertising manager.



Lundberg

Mr. Lundberg will direct Milprint's publication and direct-mail advertising and sales-promotion activities.

Frank B. Straub and Robert L. Harms, both formerly associated with the Muirson Label Co., Peoria, Ill., have been appointed sales representatives for the new canned-food label division of The Meyerco Co., Chicago decalcomania manufacturers. Mr. Straub will continue to make his headquarters in Indianapolis, while Mr. Harms will operate from the company's Chicago sales offices.

Robert de S. Couch of General Foods Corp. and vice president of the Packaging Institute and Dr. L. V. Burton, executive director of the Institute, flew to London recently as a "reverse flow team" under the auspices of Anglo-American Council on Productivity, a division of E. C. A., to attend the British National Packaging Exposition at Olympia. Their attendance was requested by the British Packaging Team who visited the U.S. from December, 1949, to February, 1950, to participate in a series of packaging conferences.

Lawrence A. Appley, president of the American Management Assn., has been elected a director of Harris-Seybold Co., Cleveland and Dayton, Ohio, manufacturers of printing equipment and supplies.

Benjamin C. Betner, president of the Benj. C. Betner Co., paper-bag manufacturers, Devon, Pa., died on Feb. 1 after a long illness. Mr. Betner, one of the pioneers in machine-made paper bags, was at one time a partner of Thomas M. Royal in the firm of Thomas M. Royal & Co. With his retirement in 1925, he resigned from that firm. However, in 1927 he organized his own company, of which he was president until his death.

Robert J. Meagher, formerly on the staff of the Folding Paper Box Assn. of America, Chicago, died recently of a heart attack.

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Without damage
feed parts . . . small,
medium or large . . .

Feeding Rubber Stoppers at 180°
wood, metal, fibre, glass or plastic . . . of various shapes.
. . . to grinders and presses, inspection and packaging
devices, and other automatic processing equipment.

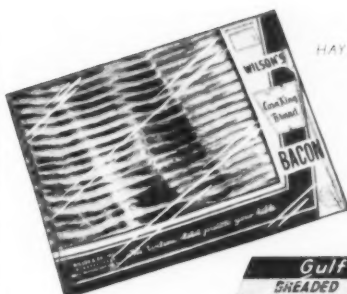
Extremely compact, these units operate by controlled
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other wearing parts to require expensive maintenance.

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APRIL 17-20
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wrapping as you like it

Hayssen Automatic Wrapping is your assurance that
your packages will have that trim appearance which
truly reflects the quality you invest in your products.
At the same time it keeps the unit-cost of wrapping at
a low level. Practically any type of wrapping paper or
film may be used. Six-sided, printed designs are ac-
curately registered by the Hayssen Electric Eye.

The Hayssen is low in initial cost, completely auto-
matic, and easily adjusted to accommodate many pack-
age sizes on one machine. It can be operated separately
or tied into your production line, with speed geared to
keep the line running steadily and smoothly. Further,
the Hayssen is backed by more than 40 years of skilled
craftsmanship and wrapping machine experience. To
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. . . write for complete information today

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ELECTRIC EYE WRAPPING MACHINES

IT PAYS TO WRAP
THE HAYSEN WAY



For your information

The 1951 Set-Up Paper Box Competition sponsored by the National Paper Box Mfrs. Assn. came to a close on March 10. All entries and prize winners will be displayed to the membership at the NPBMA annual convention in Atlantic City, June 3-6. Three panels of judges will select awards at Philadelphia in April. The Grand Award, however, will be chosen at Atlantic City by NPBMA member companies. Awards will be given to the winning box manufacturer and his customer as well. Heading the Competition Committee is Douglas T. Neale of Edwin J. Schoettle Co. assisted by Raymond H. Dowd of Dennison Mfg. Co., William C. Milson of F. N. Burt Co., Inc., C. C. Vatter of Bradley & Gilbert Co., and Gustav L. Nordstrom, NPBMA executive secretary.

What's doing

- April 1-5—American Chemical Society, 119th national meeting, Cleveland.
- April 2-4—National Paper Trade Assn. of U.S., meeting, Waldorf-Astoria, New York.
- April 2-4—American Pharmaceutical Mfrs. Assn., convention, Boca Raton Club, Boca Raton, Fla.
- April 3-4—Point-of-Purchase Advertising Institute, 5th annual Symposium and Exhibit, Waldorf-Astoria, New York.
- April 3-5—Produce Prepackaging Assn., 1st annual conference and exposition, Neil House, Columbus, Ohio.
- April 16—Packaging Machinery Mfrs. Institute, semi-annual meeting, Hotel Dennis, Atlantic City, N.J.
- April 16-18—National Independent Meat Packers Assn., convention, Palmer House, Chicago.
- April 17-20—AMA 20th National Packaging Exposition, Atlantic City, N.J.
- April 22-25—U.S. Wholesale Grocers Assn., convention, Miami Beach, Fla.
- April 30-May 2—American Drug Mfrs. Assn., convention, Greenbrier Hotel, White Sulphur Springs, W. Va.
- April 30-May 4—American Materials Handling Society, conference and materials handling exposition, International Amphitheatre, Chicago.

Isllyn Thomas, president of Thomas Mfg. Co., has been elected 1951 national president of the Society of Plastics Engineers, Inc. Other national officers elected are Walter O. Bracken of Hercules Powder Co., vice president; Walter F. Oelman of Standard Molding Corp., secretary; William J. Dunnican of Synvar Corp., treasurer.

The 44th annual convention of the National Canners Assn., held in Chicago last month, was devoted to the mobilization of the industry's resources in support of the Government's current preparedness effort. Guest speaker was Sen. Harry F. Byrd of Virginia, who spoke on "Our Problems At Home and Abroad." Technical programs were presented on canning technology, raw-products research and fishery problems, with emphasis on defense problems. Food production problems, container conservation, manpower recruitment and price controls were subjects for discussion by members of the NCA.

Harry G. Diefendorf of Detroit, Mich., has been awarded an honorary life membership in the Society of Industrial Packaging & Materials Handling Engineers.

How to apply Niaproof water-repellent finishes to paper, boxboard and other paper products is described in a new bulletin published by the Carbide & Carbon Chemicals Division, Union Carbide & Carbon Corp., 984 Niagara Bldg., Niagara Falls, N. Y. The book, copies of which are available on request to the company, explains how unsized boxboard and corrugated boxboard storage and shipping containers treated with Niaproof powder resist dampness.

Announcement has been made of the five judges selected for the 15th Annual IPI Contests, sponsored by International Printing Ink in cooperation with the International Graphic Arts Education Assn. Harry L. Gage of Mergenthaler Linotype Co. has been named chairman. Other judges are Robert H. Caffee, Dwight Cooke, Dr. Mark Ellingson and Allerton H. Jeffries.

H. H. Pein of the Pein Box Co. and the Portland & Tygh Valley Lumber Co. was elected to the presidency of the National Wooden Box Assn. at its recent mid-year meeting to succeed J. K. Cozier of the Cozier Container Corp. Newly elected vice presidents are Morris Milbank of Rouge River Lumber Co. and Robert F. Miles of Rathborne, Hair & Ridgway Co. Re-elected were D. A. McNeill, Jr., vice president; C. D. Hudson, executive vice

president; P. John Galbraith, treasurer. Main theme of the meeting's sessions was the part that the wooden-box industry will play in the nation's defense mobilization program. A trade promotion program for 1951 was approved which will include issuance of special information to defense agencies.

The American Designers' Institute at its recent annual meeting re-elected its entire 1950 panel of officers for 1951. They include Paul MacAllister of Chicago, president; Frank Gianninoto of New York, first vice president; Robert C. Williams of Chicago, secretary; Dan Jensen of Philadelphia, treasurer. Bruce Kamp of Philadelphia was elected to the newly created office of assistant secretary. The institute voted to change its name to Industrial Designers' Institute to indicate better the scope of its members' activities.

The New York Chapter of the Industrial Designer's Institute also recently held elections. Robert L. Gruen was named president and regional vice chairman; Robert G. Goldberg, vice chairman; Ann Franke, secretary and treasurer; Elizabeth Dralle, assistant secretary.

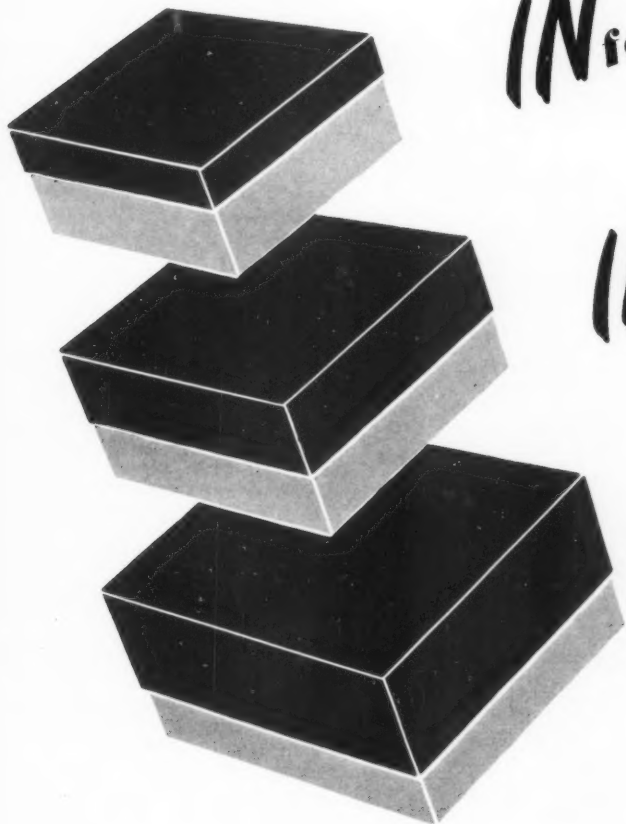
"Transwrap Automatic Packaging Machine" is the title of a new 8-page brochure published by the Transparent Wrap Machine Corp., Hasbrouck Heights, N. J. The booklet, available on request to the company, describes and illustrates the various models of Transwrap packaging machines.

Vital facts on aluminum alloys and mill products have been condensed into a handy 194-page manual containing 117 tables of data on physical, chemical and mechanical properties; standard tolerances; weights, standard sizes and production limits, as well as much fabricating data. Published by Reynolds Metals Co., the booklet is titled "The Aluminum Data Book." There are 33 pages of explanatory text, a condensed table of contents and a cross index covering both tabular and text material. Copies are available to engineers, designers and technical men who request it on company letterhead. Address Reynolds Metals Co., 2500 S. Third St., Louisville, Ky.

The Society of Industrial Packaging & Materials Handling Engineers, Chicago, announces the formation of two new chapters, one in Indianapolis, Ind., and the other at Philadelphia, Pa. Indianapolis officers are E. E. Clemons, president; E. M. Richardson, vice president; O. L. Vickers, secretary, and J. C. Heim, treasurer. In Philadelphia, officers are

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Papers that lead a hard life

Just like mother used to make? Well, really, few mothers of yore could consistently make pie crust as good as almost any little housewife can today, using pie crust mix from a package (oh, yes . . . we make the latter).



This little pig will go to market. And then a number of his most succulent "subdivisions" will be packaged in Rhinelander G&G*—exactly right for protecting his fat and porky goodness.



Tea for two—and it's true that few packaging materials can resist odor "pass-through" so well as Glassine. That's why this good paper is so often used to guard the delicate aroma of tea against foreign odors that lurk everywhere.

*Glassine
and Greaseproof—
the functional
papers that
do so many
tough jobs
well.



IN THE LAND O' LAKES • RHINELANDER, WISCONSIN

For your information

Herbert M. Lapidus, president; F. Robert Campbell, executive vice president; A. O. Manger, vice president for packaging; H. T. French, vice president for materials handling; R. F. Tettemer, secretary; B. J. Brooks, Jr., treasurer.

"Eye Catchers Are Sales Catchers," the Point of Purchase Advertising Institute's recently completed 15-min., 35-mm. sound-slide film in color on how advertising at point of purchase increases sales, is now available for showing at regular meetings of advertising clubs, sales executives' clubs, trade associations and conventions. Requests for loan of the film should be addressed to **J. Kingsley Gould**, executive secretary of the Institute, 16 E. 43rd St., New York.

Food Machinery & Chemical Corp.'s new 450-page canning-equipment catalog will be ready for distribution this month. The catalog will contain the products of FMC's Canning Machinery Divisions: **The Anderson-Barngrover Division**, San Jose, Calif., and the **Sprague-Sells Division**, Hoopeston, Ill.

Manufacturers having Government orders for products requiring Method II packaging will be interested in a new booklet on "barrier-type" materials recently published by **Amsco Packaging Machinery, Inc.** It describes in detail and illustrates the latest equipment for properly fabricating, handling and sealing these materials. Copies may be obtained on request to the company, 31-31 48th Ave., Long Island City, N. Y.

Gordon B. Thayer of The Dow Chemical Co. has been appointed a member of the Rubber and Plastics Division Executive Committee of the **American Society of Mechanical Engineers**.

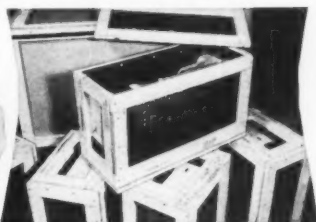
S. L. Swenson has been appointed chairman of Subcommittee VI, in charge of Interior Packing, **American Society for Testing Materials**, according to an announcement by **T. A. Carlson**, chairman of Committee D-10 on Shipping Containers, Mr. Swenson is with **Kimberly-Clark**.

Decorative treatments for **Lustrex styrene plastic** are described in a new 28-page illustrated booklet prepared by **Monsanto Chemical Co.'s** Plastics Division, Springfield, Mass. Post-molding processes discussed cover metalizing, lacquering, all types of stamping and printing, and destaticizing. The booklet, which lists materials and suppliers, is available on request to the company.

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TURN TO TEKWOOD

...the perfect, economical replacement for expensive, hard-to-get lumber, plywood, metal, chipboard and the like!



Light, but strong... rugged and rigid... easy to work, hard to hurt... that's Tekwood®.

A tough kraft-paper-and-hardwood "sandwich" that combines durability, versatility and economy. That's Tekwood.

For large jobs or small... for "workhorse" chores or glamor assignments... Tekwood gives you *more* strength with *less* weight. That means *lower* shipping costs. As a light weight container material for air express or air freight shipments, it is unequalled. And its smooth surface takes either decorative printing or shipping room

stencils with equal readiness.

Incidentally, if you have special color requirements for decorative packaging, we can match any color you specify on orders for 50,000 square feet or more. Ask us to quote prices on this service.

If you're having trouble getting packaging or shipping materials, find out how Tekwood stacks up to your requirements. Once you've tried it, the chances are you'll never use anything else.

A letter will bring you full details on specifications, prices and availability. Write today.

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Washington review

Tight tin

Anticipated adjustments in the packaging field are now taking shape as orders restricting the use of tin continue to accumulate. Beginning last November, limitations were placed on inventories of raw tin. This was followed by a 20% cut in the amount of tin that could be used for civilian products and, subsequently, by NPA orders M-24, M-25 and M-26, permitting use of tin only in certain products and limiting use in others. The effect of some of the provisions of M-24, M-25 and M-26 has yet to be felt, but most of the provisions were effective immediately on Jan. 27, the date of the orders.

Tightening control on the use of tin is, of course, a reflection of expectation that the supply this year will not be sufficient to meet all requirements. The outlook is further complicated by gross price inflation.

To date there are no restrictions on the packaging of perishable foods. But tin coatings on all cans are reduced wherever possible. You cannot use tin or materials containing tin for seals and labels, coated paper, emblems, advertising specialties, fasteners, souvenirs or powder for decorative purposes.

The NPA order M-24 specifies the maximum coating of tin or terne metal for a list of specialty items. These items, with the exception of safety cans for flammable products, do not include packages.

NPA order M-25, however, is of major concern to packagers. Under its provisions you cannot use tinsplate except for products listed in the order, which also establishes the required tinsplate specification for each product's container.

Unlimited pack is allowed only for fruits, vegetables, fish and milk that come under the classification of perishable foods. For certain products only 100% of the tinsplate used in either the first quarter of 1950 or 1949 (canner's choice) may be used in first-quarter '51. Similar restrictions will continue after the first quarter until changed by NPA.

For a third classification of products included in the list, only 90% of the tinsplate used during first-quarter 1949 can be used. However, you don't have to take delivery of cans in less-than-carload lots to meet the various provisions of M-25. There is no limitation placed on size of cans that may be used in packing products listed in the order.

NPA order M-26 deals with the use of tinsplate closures, including bottle caps and jar lids. Use of tinsplate closures is

permitted only for products listed in the order and coatings must meet certain specifications that vary with the type of product. Closures with a tin coating are permitted for all food products, except malt beverages, if packed in a hermetically sealed container made sterile by heat. However, the amount of tin coating must not exceed a specified limit. You are not restricted in the number of closures that can be used.

Collapsible tubes

The collapsible tube, one of the most functional of all package types, can undergo a certain amount of adjustment in materials, but there is really no adequate substitute for tin in packaging certain products. Restrictions on tin content take this fact into account and content is unlimited for various ointments and drugs and for food products intended for human consumption. A list of items and the tin content permitted for tubes in which they are packaged is given in NPA order M-27, issued Jan. 27. Tubes used for cosmetics and shaving creams are restricted to a tin content not exceeding 3% by weight. You cannot, however, use for any product tubes which have greater tin content than was used prior to the order.

The amount of aluminum to be used in the manufacture of tubes during any calendar month is restricted to 90% of the monthly average use of aluminum for tube manufacture during the period Aug. 1, 1950, through Nov. 30, 1950.

Glass production

Producers of glass containers report that they have been hard put to meet increasing demand with present capacity. Members of the Glass Containers Manufacturers Industry Advisory Committee have advised NPA that a shortage of basic materials, such as cullet, soda ash and coal, is holding back increased production. Fear that the shortage of paper for cartons would become worse and hamper operations was expressed. The industry is said to have produced 105 million gross of glass containers in 1950. Potential capacity of about 140 million gross, however, should allow more than sufficient capacity to meet demands this year if necessary supplies are available.

Carr to NPA

Harold J. Carr, vice president of the Owens-Illinois Glass Co., has been appointed consultant to the Containers and Packaging Div. of NPA and will advise

NPA on special problems in the container field. He has had wide experience in the glass industry and has served as director, vice president and president of the Canning Machinery & Supplies Assn. From 1944 to 1946 he was a member of the Glass Container Manufacturers Industry Advisory Committee for the War Production Board.

Less aluminum for food wraps

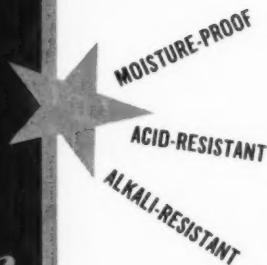
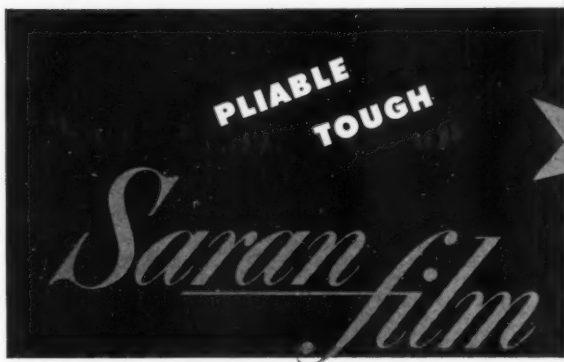
Starting in March, the use of aluminum for making food overwraps has been cut to 65% of the average monthly use during the first six months of 1950. The reduction is covered in NPA order M-7 as amended Feb. 1. The revised order also bans manufacture of many "less essential" aluminum products after April 1. Use of aluminum for decorative or ornamental items will be prohibited after June 1.

Drum and barrel reconditioning

Relief from problems facing the used steel drum and wood barrel reconditioning industry is under study by NPA and an advisory committee for the industry. The committee recommends return of drums used in exporting products, a program to encourage imports of products in drums and barrels and assurance of sufficient materials for reconditioning containers. Used drums and barrels have been hard to obtain and reconditioners have been hampered by shortages of steel rings and hoops, caustic soda for cleaning the containers and phenolic resin used as interior and exterior coating.

Steel strapping short

Use of steel strapping in non-essential packaging may have to be limited to make more strapping available for defense rated orders and essential civilian needs. Possible substitutes would be flexible strapping, including the new, strong, pressure-sensitive tapes, and adhesives. The strapping supply problem is one of material shortages and not of capacity. Capacity could be greatly expanded if more steel, zinc and sulfuric acid could be had. These materials have become increasingly short, while both defense and civilian demands for strapping have increased. The full impact of defense demands, moreover, is yet to be felt, for many defense contracts have yet to reach the shipping stage where strapping will be required. An advisory committee for the industry is assisting NPA in a study of the problems faced by manufacturers and users of steel strapping.



... ideal laminating material for food packaging!



You can use moisture-proof saran film as a laminate for many packaging materials . . . with excellent results! Possessing an exceedingly low water vapor and gas transmission rate, saran film gives added protection against moisture to food packages for civilian and defense needs.

In addition to its high moisture-proof qualities, saran film is resistant to attack by nearly all chemicals, including most acids, alkalis, organic solvents and salt solutions. It maintains these qualities through a wide temperature range.

When considering the use of aluminum foil, paper, or board for laminating with films, be sure to specify saran film. Its excellent chemical and physical properties can be incorporated in the production of unit packages, pouches, or overwraps for drugs, cosmetics . . . and many food products. Write Dow today for complete information and let us put you in touch with saran film converters who can supply your packaging needs.

Plastics Division • Packaging Section MTOF-3

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Please send me information on unit packages, pouches and overwraps in saran film laminated constructions.

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U.S. patents digest

Edited by H. A. Levey

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

Conveyor Mechanism for Turning Articles, F. F. Borkmann (to American Can Co., New York, N.Y.). U.S. 2,534,221, Dec. 19. In a conveyor mechanism for articles such as container bodies and the like, the combination of a feeding conveyor for carrying a body in upright position along a predetermined path of travel and having tumbler means disposed in path of travel.

Method of Packing Fluid Substances in Cans, J. Felber (to American Can Co., New York, N.Y.). U.S. 2,534,254, Dec. 19. The method of packing fluid substances in cans adapted to be rotated while being closed, comprising filling the can with its fluid contents, exposing the filled open can to a chilling temperature to congeal exposed surface of can contents, thereby hold contents against surging under centrifugal force, and sealing cover on while rapidly rotating.

Method and Apparatus for Sealing Containers, J. M. Sharf (to Armstrong Cork Co., Lancaster, Pa.). U.S. 2,534,305, Dec. 19. In a vacuum-closing machine in which hot condensable vapor is directed into the open mouth of a container, a vapor distributor comprising a plenum chamber having a substantially unrestricted, longitudinally directed narrow slot extending throughout a substantial portion of the length of bottom wall of plenum chamber.

Article-Orienting Apparatus, R. M. Magnuson, Campbell, Calif. U.S. 2,534,362, Dec. 19. In an apparatus for orienting articles, such as eggs, peaches, pears, and the like, a pair of article-supporting and feeding rolls disposed in parallel adjacent relation to provide an article-supporting trough, means for effecting rotation of rolls with their adjacent surfaces traveling oppositely, means for feeding indiscriminately arranged articles to rolls in definite timed relation.

Collapsible Box, F. Blair, Atlanta, Ga. U.S. 2,534,402, Dec. 19. A receptacle having a body formed of a plurality of angularly related side walls, an inwardly and upwardly inclined flange on bottom edge of side walls and bottom member including a horizontal wall having side edges spaced outwardly from side walls and depending outwardly, flanges being adapted to slidably bear against side walls and engage between side walls.

Tape Applicator, W. P. Zabel, Jr., Cleveland, Ohio. U.S. 2,534,691, Dec. 19. In a tape applicator, a frame plate, a stud projecting laterally from said plate near one end thereof for rotatably supporting a supply of tape and a peg fixed in and projecting laterally from same side of frame plate near opposite end thereof.

Carrier for Capsules and the Like, M. R. Fields (to Abbott Laboratories, North

Chicago, Ill.). U.S. 2,534,815, Dec. 19. A carrier comprising a body member having a plurality of pairs of chambers arranged in a row and opening to one side of body to permit insertion and removal of articles.

Carton, W. P. Frankenstein, Cincinnati, Ohio. U.S. 2,535,056, Dec. 26. In a carton formed from a single blank, an inner-wall member spaced from the outer-wall member, a top-wall member between inner and outer walls member and a glue flap for hingedly securing lower end of inner wall member to base.

Bottle Carrier, G. M. Acton (to Acton Mfg. Co., Inc., Arkansas City, Kans.). U.S. 2,535,113, Dec. 26. A bottle holder and carrier having a bottom member, end members on bottom and extending upwardly therefrom, an upper spacer having a plurality of apertures for receiving and substantially engaging bottles.

Bottle Holder and Carrier, G. M. Acton (to Acton Mfg. Co., Inc., Arkansas City, Kans.). U.S. 2,535,114, Dec. 26. A bottle holder and carrier including a bottom, end members integral with bottom and extending upwardly therefrom, side members integral with bottom and extending upwardly therefrom, and having upper spacer with plurality of apertures for receiving and engaging bottles.

Heat-Sealing Device, H. C. Sundstrom, Chicago, Ill. U.S. 2,535,171, Dec. 26. A heat-sealing device comprising a pair of heated clamping jaws adapted to be clamped over the edges of a container comprising a heat-sealable packaging material.

Box-Forming Machine, G. T. Hart and M. Seymour (to United States Machinery Corp., Flemington, N.J.). U.S. 2,535,413, Dec. 26. In a semi-automatic box-end-forming machine, a guide positioned in unobstructed relation to front of machine, so the operator may move a partially formed box manually along said guide, box-end-forming means positioned along guide for performing successive operations upon a blank previously coated with thermoplastic adhesive and advanced by operator from one means to another.

Board Bundle, W. R. Jones (to The Celotex Corp., Chicago, Ill.). U.S. 2,535,422, Dec. 26. A package of rectangular substantially flat sheets of building material of greater length than width comprising in combination, a plurality of such sheets each comprising a fibroboard core having an adhered surfacing of grit on one face and an asphaltic coating on the opposite face.

Apparatus for Applying Bottle Collars, W. L. Wolford (to Clorox Chemical Co., Oakland, Calif.). U.S. 2,535,473, Dec. 26. Apparatus for applying perforated paper blanks to cased bottles to serve as

collars thereon comprising, a rack to support blanks in stacks spaced to correspond to spacing of bottles in case, means on rack to hold blanks in curved position for ready application to bottles.

Material-Handling Apparatus, C. H. Anderson, Minneapolis, Minn. U.S. 2,535,476, Dec. 26. In material-handling apparatus, a support, a cradle, means on cradle for securing thereto a container having an opening at upper portion of same, a conical hood adapted to overlie said opening and close same, said hood having an opening therein extending along an element of same with valve member pivoted to hood at apex thereof and rotatable to cover or uncover said opening.

Beverage-Bottle Case, A. J. Gerber (to Beverage Sales Co., St. Louis, Mo.). U.S. 2,535,493, Dec. 26. A beverage-bottle case comprising integrally interconnected side, end and bottom walls having a plurality of integrally interconnecting spaced parallel partitions extending longitudinally and transversely to divide case into a plurality of rectangular cells for receiving beverage bottles.

Machine for Loading Cans in Trays in Staggered Relation With Double-Row Can-Feed Means, G. L. Ardron (to Continental Can Co., Inc., New York, N.Y.). U.S. 2,535,828, Dec. 26. In apparatus wherein a loading station is provided, means for advancing the conveyor and trays thereon step by step successively to present at said loading station tray spaces wherein to receive two rows of cans, means for guiding movement of trays in a straight line throughout loading thereof.

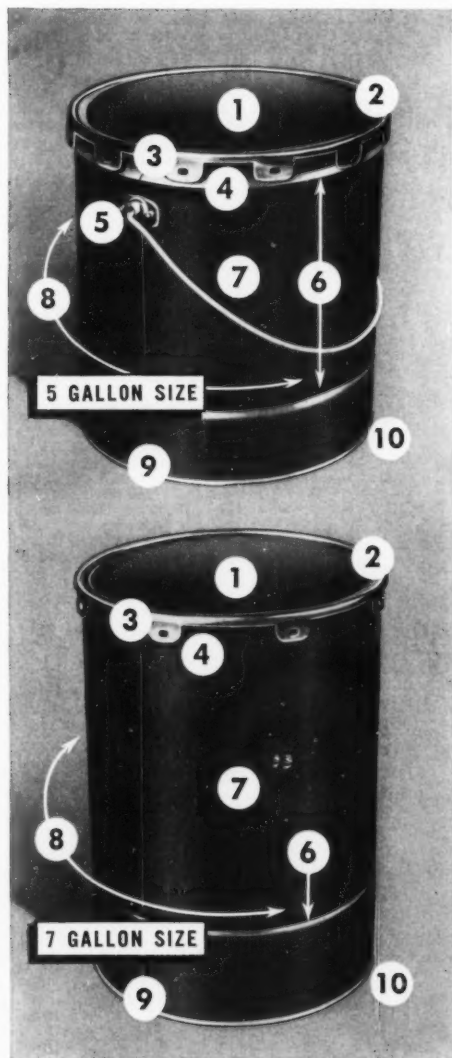
Method of Making a Tablet Box, J. Coyle (to Continental Can Co., Inc., New York, N.Y.). U.S. 2,535,838, Dec. 26. The method of making a tablet box consisting in die-drawing a metal blank to provide a body having front, rear and side walls of substantially uniform height, die-drawing a metal blank to form a cover having front, rear and side walls dimensioned to engage over body of box, slitting each side wall of body to form a rounded fulcrum.

Container Top and Closure Therefor, J. Coyle and W. F. Punte (to Continental Can Co., Inc., New York, N.Y.). U.S. 2,535,840, Dec. 26. A metal container comprising a body and a top carried thereby and having centrally thereof a cylindrical wall, outer surface of which forms a friction seat for a cover.

Metal Container for Food Products, J. Coyle and W. F. Punte (to Continental Can Co., New York, N.Y.). U.S. 2,535,839, Dec. 26. A metal container comprising a body, a bottom and a top, said top having a cylindrical neck providing an opening to the container, upper end of neck being rolled outwardly and thence downwardly to provide a cylindrical friction wall space away from neck, cylindrical friction wall at the lower end thereof being rolled inwardly to form a curl for strengthening friction wall and to provide a friction seat on outer face of friction wall, which is of uniform diameter all the way to lower end of wall.

Oil Can Spout Structure and Method of

Check these 10 Continental features in pails for dry and viscous products



Also supplied in galvanized plate.

- ✓ ① Circular panel in cover gives greater rigidity and allows firm stacking of filled pails.
- ✓ ② Cover has deep gasket groove and full skirt — provides sure seal and if desired, permits use of a gasket.
- ✓ ③ Lugs on cover are full length with punched slots — giving safer sealing and easier opening. Shipping tags can be attached through slot.
- ✓ ④ A small embossment over each lug prevents jamming and sticking of covers during shipment or in storage.
- ✓ ⑤ Ears on 5 gallon size are rigidly riveted to body and doped to prevent leakage. Pail has a heavy wire bail.
- ✓ ⑥ Outward bead near top (5 gal.) and inward bead near bottom give a stronger, more rigid body.
- ✓ ⑦ Pails are made of 28 gauge cold rolled steel throughout. Bodies are made of 2 panels, press locked and doped — insuring a sturdy, tight container.
- ✓ ⑧ Both front and back panel of body can be attractively lithographed with sales message.
- ✓ ⑨ Bottom is compound lined and has a 5 thickness seam, adding strength to pail.
- ✓ ⑩ Bottom bead prevents pails from jamming too tightly when nested in shipment and storage.

Add up these ten Continental features and you have a high quality flaring pail, perfectly suited for packaging either dry or viscous products. Made in both 5 and 7 gallon sizes, Continental flaring pails serve as strong, protective containers, yet they are light and easy to handle. They nest snugly — save storage space and freight costs (5,000 to 8,000 per 40' car). And to top it off, they can be attractively lithographed.

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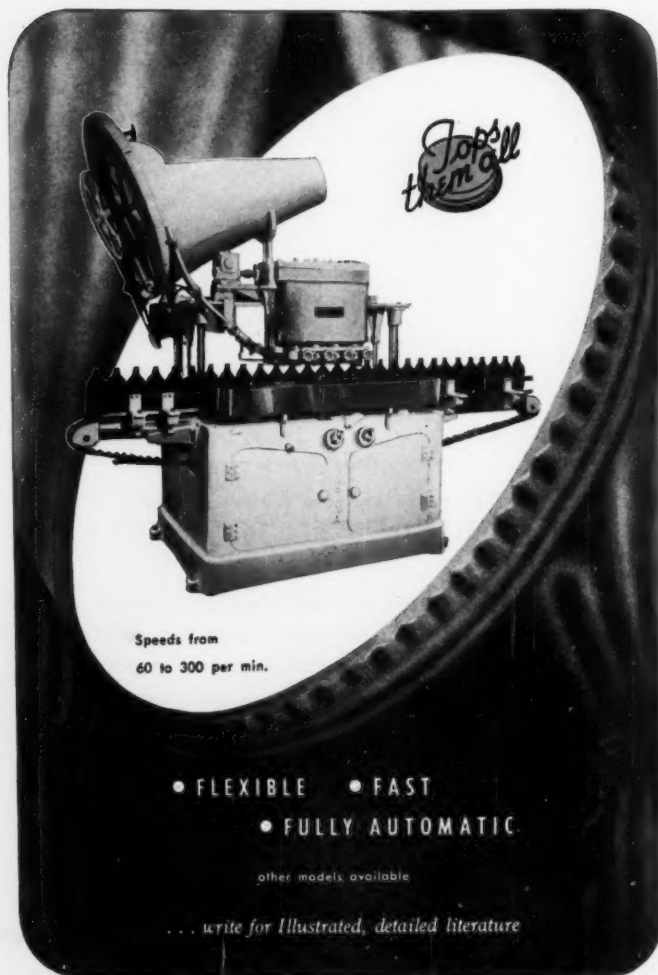
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U. S. patents digest

Attaching the Spout, I. Coyle (to Continental Can Co., Inc., New York, N.Y.). U.S. 2,535,837, Dec. 26. A container comprising a body portion, a closure end therefor, said closure end having an upwardly extending neck shaped to provide on interior thereof a smooth slightly outwardly and upwardly flared seat, and a spout having a laterally extended supporting base including a top surface grooved to provide an upwardly directed edge shoulder and a peripheral surface which is firmly seated in and tapered to conform to flared seat to provide a tightly sealed connection between spout and neck.

Square Can Vacuum-Closing Machine, M. M. Sedwick (to Continental Can Co., Inc., New York, N.Y.). U. S. 2,535,870, Dec. 26. In a container-sealing machine, a can-seaming turret, a detachable centrally apertured bottom plate for the turret, a can elevating and vacuumizing assembly shiftable into position against bottom plate, a vacuum-operated lifting pad and means for moving the assembly into sealing engagement with bottom plate of turret.

Dispensing Container for Powdered Materials, J. W. Seigh (to Continental Can Co., Inc., New York, N.Y.). U.S. 2,535,871, Dec. 26. A container for dispensing powdered material comprising a body having flat sides and rounded corners, a closure end including a perforated nozzle section and a skirted section joined to the nozzle section by an interfolded seam, said skirted section having a depending skirt frictionally engaging outer upper-portion of body.

Fish-Canning Machine, J. P. Jakob (to American Can Co., New York, N.Y.). U.S. 2,536,060, Jan. 2. In a fish-canning machine, the combination of a supply tunnel for fish storage, a carrier for advancing fish to a position adjacent the entrance end of tunnel, an intermittently rotatable drum disposed adjacent entrance end of tunnel.

Container with Narrow Tearing Strip, G. C. Erb (to American Can Co., New York, N.Y.). U.S. 2,536,044, Jan. 2. A sheet-metal container made of comparatively light-gauge tinplate, comprising a container wall having a pair of substantially V-shaped score lines cut therein and cut score lines defining between them an extremely narrow removable tearing strip of wire-like dimensions.

Tape-Serving Machine, T. H. Krueger (to Better Packages, Inc., a corporation of New York). U.S. 2,536,066, Jan. 2. In a pull-out machine for dispensing pressure-sensitive adhesive tape, means for holding a supply roll of tape, means for anchoring free end of tape by adhesion of same to an anchoring surface and means for unwinding tape from supply roll while free end is anchored in stationary position.

Clueless Interlock for Double-Walled Folding Boxes, R. B. Meller (to Bemiss-Iason Co., San Francisco, Calif.). U.S. 2,536,394, Jan. 2. In a box blank of foldable sheet material including a main panel, a first side wall hingedly connected

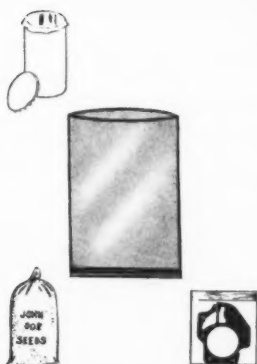
IF

YOUR PACKAGING REQUIRES BAGS PLAN ON

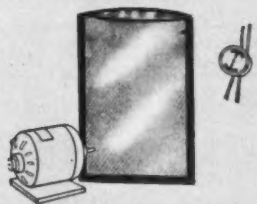
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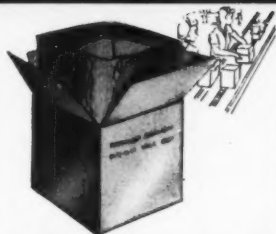
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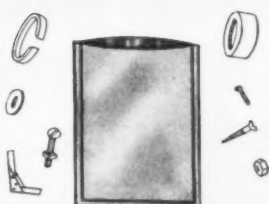
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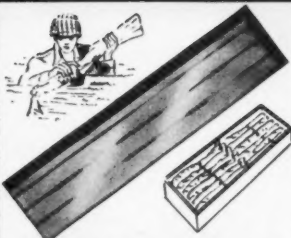
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SPECIALISTS in paper labels of all kinds for over 45 years . . . that's the type of experience we offer you.

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We operate a completely air conditioned plant. This means high speed, high quality production without the extravagance of spoilage. Our quotations always reflect this manufacturing economy.

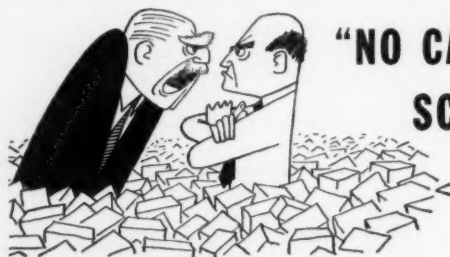
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"NO CARTONS?" SCREAMED THE VP

"Look," he growled, "I asked for 5,000 cartons marked XY2 last Monday!"
"And here it is Tuesday," flared the Stock Head. "Even if the printer had worked all night, we still wouldn't have room for them. Not with those 50,000 cartons marked AB4 still lying around—the ones you ordered three months ago."

"Well, this order has to get out tonight," sputtered the VP "Have somebody with good handwriting mark the numbers on the cartons."

Know how that problem could have been avoided? With a Markem box printer or carton marker. These versatile machines let manufacturers imprint their own cartons, labels, envelopes with swift, professional neatness. They're designed for flexibility—quick changes of variable data, easy to operate, fast-drying inks in many colors. Our harassed Stock Head could have run off exactly the number of cartons the VP needed, with the latest designation, in a couple of hours if only he'd had a Markem machine handy.

Best of all, he would have eliminated inventories and outside printing bills. Maybe a Markem machine is the answer to your problems. Why not write us today, telling us what your imprinting needs are, and find out the facts?



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U. S. patents digest

from a single sheet of material comprising a bottom wall, side and end walls folded up at opposite sides of bottom wall, webs connecting adjacent edges of side and end walls and folded from opposite side walls inwardly along medium lines and equipped with tongues for locking purposes.

Folding Box, M. I. Williamson (to National Folding Box Co., Inc., New Haven, Conn.). U.S. 2,536,990, Jan. 2. A folding box made from a tubular blank of foldable sheet material and comprising an upper main panel, lower main panel, side wall forming panels adapted to be folded face to face to form side walls, and side wall forming panels hingedly connected to main panels.

Closure for the End of a Tubular Body, J. C. Dunn, Providence, R. I. U.S. 2,537,184, Jan. 9. A package comprising a tubular core providing a chamber, cloth wound thereon, a closure of the end of core having a body portion of less diameter than the inner diameter of the core, providing a space between body and inner wall of core when cap is inserted therein.

Device for Filling Cartons, W. B. Massey, Richmond, Va. U.S. 2,537,361, Jan. 9. A generally cylindrical measuring receptacle having an open end, receptacle having a plurality of slots extending generally longitudinally thereof from its open end and terminating a distance from its other end to leave a continuous band of substantial width to which receptacles are attached.

Bottle Carrier, H. W. Forrer (to Atlanta Paper Co., a corporation of Georgia). U.S. 2,537,452, Jan. 9. A collapsible carrier for bottles and other similar containers comprising a bottom wall panel formed with a medial fold line, opposed side-wall panels foldably joined to bottom panel along opposite side edges thereof parallel with medial fold line.

Printing Ink, J. C. Curado (to Sun Chemical Corp., New York, N.Y.). U.S. 2,537,513, Jan. 9. An ink material having the properties of printing without fill-in from halftone printing plates and of setting as an imprinted film being beta-naphthol pitch having less than 0.1% by weight of glycol-insoluble constituents and liquid a carrier component being 2-methyl-2-4 pentanediol.

Bottle Carrier, E. L. Arneson (to Morris Paper Mills, Chicago, Ill.). U.S. 2,537,614, Jan. 9. A collapsible bottle carrier fabricated of flexible fibrous material, comprising in erected condition thereof a bottom, a pair of opposed side-wall panels flexibly conjoined to bottom, a handle member, a pair of apertured bottle-receiving panels integrally connecting handle to respective side panels.

Bottle Carrier, E. L. Arneson (to Morris Paper Mills, Chicago, Ill.). U.S. 2,537,615, Jan. 9. A paperboard article carrier comprising in erected condition thereof, an upright multi-ply panel, a pair of opposed end walls bendably connected substantially medially of the width to the respective opposite ends of said panel.

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and trained technical assistance—
contact any of these nearby
sales-service offices.

FLEX-FOIL packaging is PLUS packaging. This new Standard Cap and Seal material—FLEX-FOIL 265—is QM qualified for unit packing of subsistence supplies—but here's the plus. FLEX-FOIL is built to give maximum production with minimum rejects.

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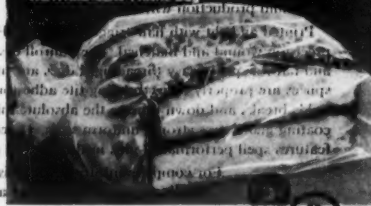
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Concentrated milk

(This article continued from page 89) as needed, independently of seasonal fluctuations in the fluid-milk supply.

In adopting the 6-oz. can for this product, Meadow-Gold simplified its marketing problem because most consumers have become accustomed to buying frozen orange juice in the same type of container and are familiar with the method of reconstituting the product by combining it with three parts of water to produce 1½ cups of the finished drink.

In its initial sales test, the Meadow-Gold frozen concentrate is being sold from frozen-food cabinets in approximately 100 retail food outlets covering a diversified cross section of the population. The sales program was preceded by a free distribution of three cans of the product to 200 Chicago homes, with an independent survey organization querying housewives to determine their reaction as potential consumers. The survey, details of which are not available for publication at this time, indicated that a large percentage of this market fills a very definite need and that a large percentage of the housewives interviewed would purchase several cans at a time, as they do frozen orange juice. If the results of the marketing test confirm these findings, steps will be taken to manufacture the product in the volume required for national distribution, the company reports. To date, the only advertising used in connection with the product has been a point-of-sale piece stressing the theme that each can makes four glasses of chocolate-flavored drink.

Beatrice sales executives point out that the relative shortage of low-temperature cabinet space in retail outlets is an important factor limiting full-scale distribution of the product at the present time. In addition, the up in production would have to be accompanied by an increase in store cabinet space to 100,000 sq. ft. in 100,000 cabinets used for fluid milk, butter and eggs. The company has no plans for storage of the frozen concentrate.

Borden research

Further evaluation of the marketing activity regarding milk concentrates may be found in the fact that Borden Co. recently completed an important installation in Chicago for the production of a milk concentrate produced

the Sheffield Printing Co., using Reynolds' Grand Patterson Chicago, and supplied labels for Beatrice Foods designed by Food's former consultant, American Can Co., New York. Cans for Beatrice's "Ez-Pop" concentrated, American Canners' Filter containers for National

is article continued (from page 82)

to for its special-dressings line. Four-color ads are carried in Life, Newsday, Evening Post and other top papers. More than 125,000,000 ads are reached through magazine circulation. In addition, Band-Aid adhesive bandages are featured regularly in ads appearing in 13 leading mass-circulation magazines and on two national consumer magazines, the "Cavalade of Bands" and the "Cavalade of Bands."

Supporting the national advertising campaign is a local publicity and campaign in the New York area. Local radio and television stations featuring the Band-Aid campaign take up the Band-Aid theme. The Band-Aid campaign is a coordinated effort to build the reputation of the product and to bring attention to the product.

The package point-of-sale is a considerable element in the Band-Aid campaign. The package point-of-sale is a considerable element in the Band-Aid campaign. The package point-of-sale is a considerable element in the Band-Aid campaign.

A collage featuring a woman's face in the foreground, a lighthouse in the background, and various text elements including "Wherever fine aniline painting", "coasts", "lockbound", "from", and "to".

Wherever fine aniline printing is the rule.

Most types help a

* MOSTYFES .

• Write for procedure
SERVICE

Hev, Joe, is it as good as they say?

She doesn't want a package

d manufacturers everywhere and the today good
volume turnover.

shelf appeal catches the eye, suggests purchase and the product—no the package—tells me what I want to see. The protective packaging is the answer. Glad, touring the impulse to buy. Row 1 product, it clinches the

...ing behind today's ever increasing demand for cellulose
largest exporters of cellulose film in the world are now

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story: BATH ROAD NOT WASH CENTER, SOME TEAS FOR

25



*Mosstypes® help to make it so**

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• Write for brochure describing MOSSTYPE RUBBER PLATE PRODUCTION SERVICE... and FREE "GEAR and CYLINDER SELECTOR CHART"



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by the removal of water under high vacuum, permitting evaporation at low temperatures. The Borden installation marks the culmination of more than two years of experimental work along this line by the company's Chicago milk division. The company has not yet announced whether the product may ultimately be produced in liquid or frozen form, or what type of container will be used.

CREDITS: Fibre containers for National Dairy's "Sealtest" concentrate, American Can Co., New York. Cans for Beatrice Foods frozen concentrate, American Can Co. labels for Beatrice Foods designed by Sigurd Patterson, Chicago, and supplied by Sheffer Printing Co., using Reynolds Metals Co. foil.

Band-Aid

(This article continued from page 85) paign for its surgical-dressings line with four-color ads appearing in *Life*, *Saturday Evening Post* and other top media. More than 122,000,000 subscribers are reached through magazines. In addition, Band-Aid adhesive bandages are featured regularly in ads appearing in 13 leading mass-circulation consumer magazines and on two television programs, the "Cavalcade of Stars" and the "Cavalcade of Bands." Supporting the national advertising, many independent druggists and chain drug organizations run local radio and newspaper advertising featuring these products.

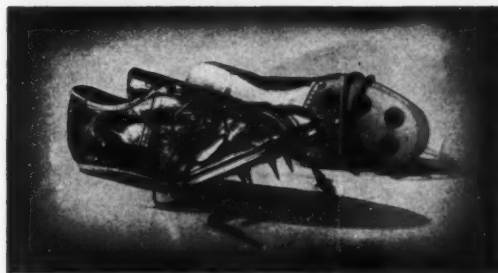
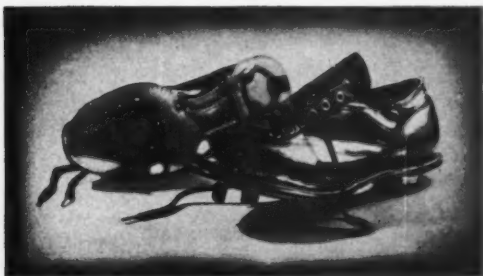
At present, magazines take up the bulk of J & J's promotion, primarily because magazine reproduction permits visual impression of the package as the customer will see it at point of sale. The package point-of-sale tie-up is considered extremely important by J & J.

Band-Aid bandages, as well as other dressings, have been found to be real impulse-sale items. Consequently, J & J has made a constant effort to promote display. The firm was the first surgical-dressings manufacturer to push the idea of a separate surgical-dressing department in retail outlets. Through the years J & J has supplied countless first-aid-department signs, counter fixtures and displays.

Medical usage, of course, has an important impact on home users. Doctors and nurses readily accepted the time-saving feature of Band-Aid bandages right from the beginning. Equally important has been J & J's continued emphasis on quality and confidence, which in turn has won overwhelming

Can You Match Them Up?

**BASKETBALL
BASEBALL
BOXING
TRACK**



ONEIDA
paper products inc.

14 CLIFTON BLVD., CLIFTON, NEW JERSEY
Los Angeles, Calif. Fort Worth, Texas

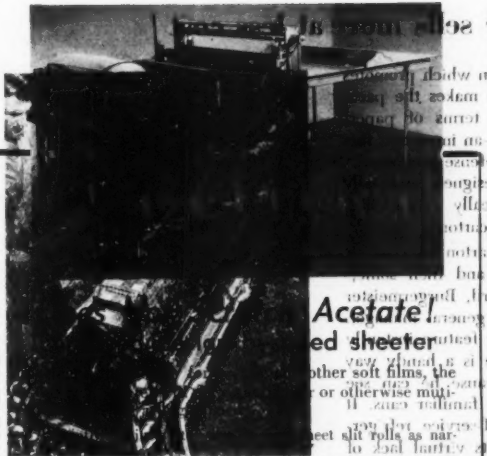
MARCH 1951

Just as each of these shoes is meant to do one specific job, so are Oneida coffee bags designed to do one job. They are designed to sell coffee, and they do just that. Oneida coffee bags square-off like boxes when packed—making it easy to set up hand-hitting point-of-sale displays. Engineered to give smooth, trouble-free performance on automatic packaging equipment. They're printed with a gleaming, glossy finish. The result: bags that are hard to pass by . . . easy to buy!

Yes, you're right when you pick Oneida to individualize your package. You're also right when you pick Top 1, on the boxer's shoes; Top 2, baseball; Bottom 1, track; Bottom 2, basketball.

Send for samples of Oneida "core-crafted" bags today. And remember: For coffee—for any other free-flowing or semi-free-flowing product, Oneida packaging pays off . . . with volume sales.

Converters and Color Printers of Bags, Envelopes, Sheets and Rolls from: Glassine, Cellophane, Pilefilm, Parchment, Polyethylene, Sulphite, Foil, Acetate, Kraft, Waxed, Coated and Laminated Grades . . . in Flat, Square, Automatic, Window Satchel-Bottom, Duplex, Embossed and Heat-Lek Styles.



Acetate sheeter

- will sheet a 1000' roll in 3 to 6 minutes for 1000' rolls
- handles standard size mill
- core adapters of any size available from stock
- sets up in 3 to 6 minutes for 1000' rolls
- no vibration, no noise at any speed
- stacker table and backstop facilitate stacking
- ruggedly built, not weighed down by 1000 pounds

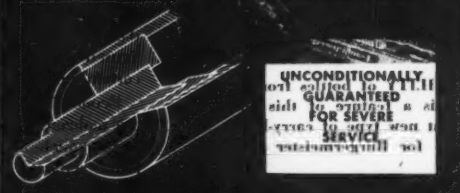
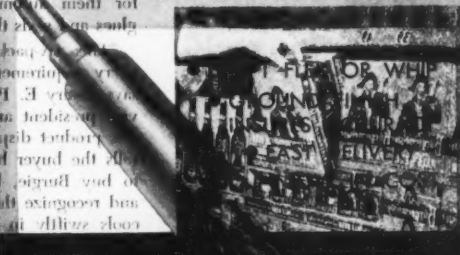
Price and complete details on request. Write today.

NYLES GOODMAN COMPANY

Plastic Sheet Fabricating Machinery
Box 181 Freeport, Long Island, N.Y.

FOR BETTER ANILINE PRINTING

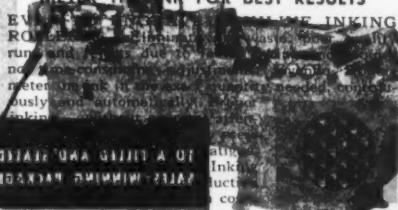
no-flex PLATE ROLLS



CUT-AWAY SHOWS HOW EXCLUSIVE PROCESS FUSES ENTIRE JOINT INTO ONE SOLID MASS, INSURING EXTREME RIGIDITY. TUBE CONSTRUCTION REDUCES WEIGHT.

No-Flex — the new plate rolls that completely eliminate flexing and whipping — are your guarantee of a perfect impression. Special high speed lathes and equipment and improved methods of manufacture get you made rolls quickly, and at a lower cost. Carefully inspected before you need plate rolls, call Pat for lower cost and better printing.

EVEN ENGRAVED INKING ROLLS



Quotations on plate, impression, special rolls and custom equipment supplied without obligation.

PAMARCO
ANILINE PRINTING PREPARES
EVEN ENGRAVED ROLLS
PAPER CONVERTING MACHINERY

ZOPHAR

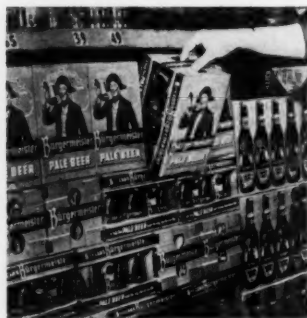
WAXES

for heavy paper and dip coating
specifications JAN-P-115
Special coatings for paper & board
Impregnating and laminating
resins and compounds
Fungus proofing waxes to meet all government specifications
Our laboratory will gladly cooperate in new developments

ZOPHAR MILLS, INC.
110 130 26th Street
BROOKLYN 14, N.Y.

New automatic cartoner sells more at less cost

A new type of carry-home container being used by the San Francisco Brewing Corp. is reported to have upped its canned Burgermeister beer sales by 10%. The convenient, easy-to-handle carton displays the



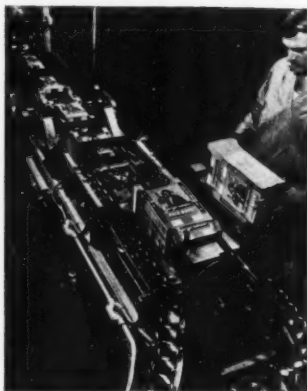
VISIBILITY of bottles from all sides is a feature of this convenient new type of carry-home carton for Burgermeister beer.

six actual cans that it holds, all but a scant margin at the top and bottom of each can being visible to the shop-

per. The very design which promotes this display feature makes the package economical in terms of paper-board consumption—an important factor in the current defense economy. A simple machine designed especially for them automatically forms, fills, glues and seals the cartons.

"This six-pack carton meets our every requirement—and then some," says Henry E. Picard, Burgermeister vice president and general manager. "Its product display feature instantly tells the buyer here is a handy way to buy Burgie, because he can see and recognize those familiar cans. It cools swiftly in self-service refrigerated cases due to its virtual lack of sides. It 'picks up' easily, without endangering women's fingernails. We figured it would sell more beer. It certainly has."

Economies offered by the carton are realized through the unusual machine which automatically combines four separate operations into a smooth flow of finished, filled packages produced at speeds of from 50 to 60 per minute, well within the range



MACHINE, specially designed for automatically forming cartons, also fills, glues and seals them at the rate of 50 to 60 a minute.

of any type of equipment in existing brewery can lines.

Cans enter the cartoner from two conveyors, one on each side of the unit. Here they are automatically



FROM A ROLL OF STOCK

Films • Foils • Papers

TO A FILLED AND SEALED SALES-WINNING PACKAGE

**Your Product Packaged
... for the government
... for commercial use
Automatically at Low Cost**

Here is the most saving, streamlined way to package your product for maximum economy and plus sales!

Base machine makes a pouch style bag, opens it for filling, seals it, and discharges a completed package. Design allows for selection of the best filling equipment available for your product. Special feeders for unusual items. Standard unit makes bags from heat sealing papers, foils, cellophane, laminations, etc. Special model available for polyethylene.

Whether your product is liquid, powder, solid, multiple items, or requires packaging under nitrogen gas, the Bartelt Machine will handle your needs. Write for details today.

- 1 Makes the bag from a roll of paper, film, or foil.
- 2 Fills the bag by count, by volume, by auger, or by special feeders.
- 3 Finishes up to 36,000 packages per eight hour shift.



BARTELT ENGINEERING COMPANY • ROCKFORD, ILLINOIS

separated into groups of three cans each and moved, in line with the opposite group, along the can lanes of the machine. Between these lanes is the carton magazine, from which the flats are fed, set up, loaded with six cans (three from each side) and given spot applications of adhesive as they pass through the machine.

Instead of the conventional compression conveyor which grips cartons to hold glued flaps in position as it moves the containers along, the machine has a system of gripper plates mounted on synchronized, endless conveyors over and under the carton flow. These plates grip each carton individually and carry it through the glue-drying period to the discharge point at the end of the machine.

The correct positioning of the carton's glue flaps is assured by rubber-faced metal fingers on each plate which clamp shut automatically and open again when the cycle is completed.

All operations are automatic, the sole manual action required being refilling of the carton magazine. One other worker is required to operate the semi-automatic casing machine which places the cartons into shipping cases.

Patents are now pending on both the display carton and the cartoning machine, and they will be marketed together.

CREDIT: "View Pack" carton and cartoner, King Sales & Engineering, Inc., San Francisco.

Defense packing plan

A plan to bring appliance distributors, who daily are getting fewer products to sell, directly into the defense production effort in the field of packaging has been advanced by the Thor Corp., Chicago, producer of washing machines. The firm submitted to the Government a proposal to convert into packaging centers for the Armed Forces more than 3,500,000 sq. ft. of warehouse facilities operated by its 77 distributors. Under the proposal, Thor would act as a prime contractor on defense packaging projects. Its distributors would be its sub-contractors. M. R. Wilson, a Thor executive, said the plan would give the Armed Forces efficient packaging centers at practically every key industrial and transportation center in the country.

If you package these



POWDERS



TABLETS



FREE FLOWING
SOLIDS



LIQUIDS OR
SEMI-LIQUIDS

you'll
want
this
brochure



Gives complete details on economical, automatic packaging with Transwrap equipment. Tells how you can cut your packaging costs . . . and step up your product sales. Helps you uncover the hidden profits in your production line!

Transwraps handle a wide variety of products, in sizes from 1 1/4" x 1 1/2" to 5 1/4" x 13"; by volume, from 5 cu. in. to 80 cu. in. Helps your difficult schedules—at 40 to 150 pkgs. per minute!

LIQUID FEED UNIT, SHOWN—designed to package all types of liquids and semi-liquids. Output 40 to 120 per min.—5 cu. in. to 80 cu. in.; pillow or fin-seal pkgs., all heat-sealing materials, sizes—1-13/16" x 3" to 5 1/4" x 13". Pressure feed by positive displacement piston type pump, or small Bosch-type pump. 4' x 5' x 8'; 2150 lbs.; 3/4 h.p. motors, full load 1600 w.

TRANSPARENT-WRAP MACHINE CORP.

USE THIS COUPON FOR FREE
8-pg. BROCHURE

TRANSPARENT-WRAP MACHINE CORP.

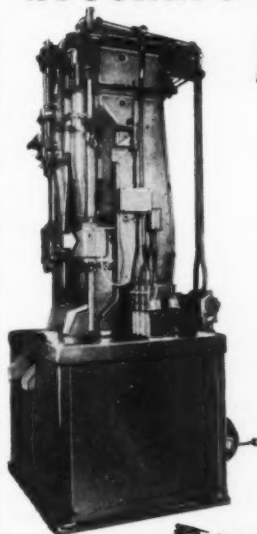
142 Rt. 17, Hasbrouck Heights, N. J.

NAME _____ TITLE _____

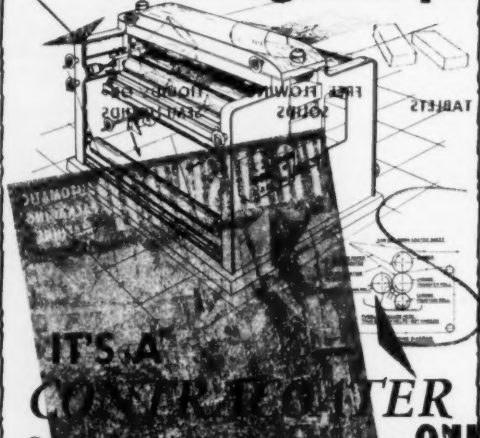
COMPANY _____

ADDRESS _____

CITY _____ STATE _____



IT'S NEW
9'x12' package these



IT'S A COATING DOCTOR

Coating machine for fountain rolls, reverse side coated, etc. Features include:

1. **ADJUSTABLE POSITION DOCTOR** can be deposited on either side of sheet. Coating doctor can be adjusted to return material to original position.
2. **COATING DOCTOR** predetermine the width of coating from fountain roll to transfer and metering roll. These adjustable doctors remove excess material from undesired portions of sheet.
3. **CLEANING DOCTOR** remove excess coating material from metering roll.
4. **ADJUSTABLE PRE-LOADED BEARINGS** eliminate rubbing and wear.
5. **PHENOLIC PLATED BOLTS** ground extremely hard.
6. **PHENOLIC PLATED BOLTS** ground extremely hard.
7. **ADJUSTABLE POSITION DOCTOR** can be deposited on either side of sheet. Coating doctor can be adjusted to return material to original position.
8. **ADJUSTABLE POSITION DOCTOR** can be deposited on either side of sheet. Coating doctor can be adjusted to return material to original position.
9. **ADJUSTABLE POSITION DOCTOR** can be deposited on either side of sheet. Coating doctor can be adjusted to return material to original position.
10. **ADJUSTABLE POSITION DOCTOR** can be deposited on either side of sheet. Coating doctor can be adjusted to return material to original position.
11. **ELECTRIC MOTOR** allows any desired speed differential between rolls.
12. **CONTROLLED ROLL PRESSURES** VISUALLY RECORDED.
13. **OPEN FRAME** for visibility and easy access. Speeds up to 1000 f.p.m. Sizes to all requirements.

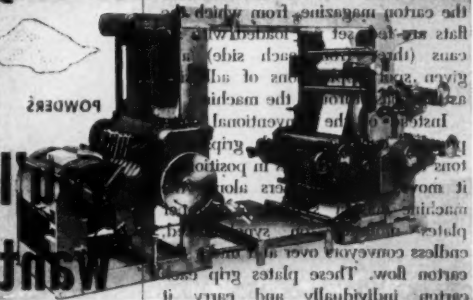
Contact Dilts for additional particulars

DILTS MACHINE WORKS

FULTON, NEW YORK

Division of the Black-Clawson Company, Hamilton, Ohio

15,000 SHEETS PER HOUR!



available in cut lengths from 9" to 32". Width sizes range from 20" to 32". All sheets delivered properly aligned to allow removal from top of pile.

For more information, write to:

H. H. HEINRICH, INC.
200 VARICK ST. NEW YORK 14

Labels... BY THE MILE!

Labels... BY THE MILE!

Labels... BY THE MILE!

Labels... BY THE MILE!

PACIFIC COAST FOIL CO.
DIVISION OF JOHNSON & JOHNSON
107 BATTERY STREET SAN FRANCISCO 11
1127 WILSHIRE BLVD. LOS ANGELES 14

2 out of every 3 beer bottles*

A special war mobilization conference covering price control, power, materials conservation, government and related problems highlighted the 44th annual convention of the National Canners Assn., held at the Stevens Hotel, Chicago, Feb. 14-22. Concurrently with these sessions the National Food Brokers Assn. held its business meeting and the Canners Supply Assn. held its convention.

Dr. J. P. Cluskey, director, National Institute of Food Processing, presented a paper on "The Role of Special Analytical Tools in Special Investigation Work and in Troubleshooting." O. A. Alexander, Research Director, American Can Co., presented "The Canner's Role in Civil Control."

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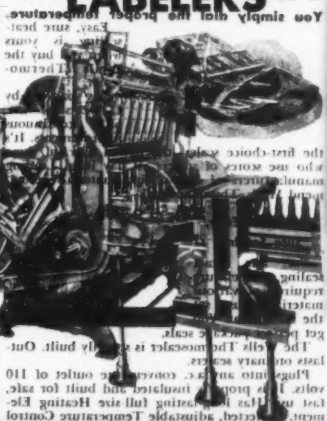
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Just What You Want...

Heat Sealing

ARE APPLIED ON
ERMOLD
AUTOMATIC
THE LABELER



*A recent survey made through the United States Association of Multiple Label Manufacturers shows that more than 66% of the bottle labeling capacity in the United States is being handled by the Ermold Automatic Labeling Machine. This is due to the fact that the Ermold Automatic Labeling Machine is the most efficient, economical, and reliable machine for this purpose. It is capable of labeling bottles at a rate of 100 per minute, and it is able to handle a wide variety of bottle shapes and sizes. The machine is also capable of handling labels of various shapes and sizes, and it is able to apply labels to both the front and back of a bottle. The Ermold Automatic Labeling Machine is a true labor-saving device, and it is the only machine of its kind that is capable of handling the entire labeling process from the time the label is fed into the machine to the time it is applied to the bottle.

For money-saving recommendations on your labeling needs, consult your Ermold Representative.

EDWARD ERMOLD COMPANY, 452 HUDSON STREET, NEW YORK 14, N. Y.
OFFICES: BOSTON, CLEVELAND, LOS ANGELES, MILWAUKEE, ST. LOUIS, SAN FRANCISCO, MONTREAL, TORONTO, MEXICO, GUATEMALA

ERMOLD

WELLS MANUFACTURING CO.
INCORPORATED 1912

*Just What
You Want...*



for Sure Heat Sealing of Pliofilm and Cellophane

... the standard

Wells THERMOSEALER

You simply dial the proper temperature.



Easy, sure heat-sealing is yours when you buy the Wells Thermo-sealer.

It's backed by 11 years of use, plus continuous improvements. It's

the first-choice sealer, the nation over, of those who use scores of sealers all day long. Leading manufacturers of heat-sealing materials recommend Wells Thermo-sealers.

Use It for Easy,

Sure Sealing

For any exact sealing temperature required of various materials, just set the thermostat. You get perfect package seals.



The Wells Thermo-sealer is sturdily built. Outlasts ordinary sealers.

Plugs into any a.c. convenience outlet of 110 volts. It is properly insulated and built for safe, fast use. Has long-lasting full-size Heating Element. Protected, adjustable Temperature Control



of high accuracy. Square nose makes neater seals and easier labeling.

The Wells Thermo-sealer, built of Aluminum and weighing but 10 oz., does not fatigue the operator—speeds sealing, lowers costs. Designed to withstand long, tough, continuous use.

Buy Now From Your Dealer
In Heat-Sealing Materials

WELLS MANUFACTURING CO.



220 Ninth Street
San Francisco 3, Calif.

Canners Convention report

A special war mobilization conference covering price control, manpower, materials conservation, procurement and related problems highlighted the 44th annual convention of the National Canners Assn., held at the Stevens Hotel, Chicago, Feb. 14 to 23. Concurrently with these sessions, the National Food Brokers Assn. held its annual business meeting and the Canning Machinery & Supplies Assn. sponsored a large exhibit of automatic food-processing equipment, containers, labels and related supplies.

Herbert J. Barnes, vice president, Kaysville Canning Corp., Kaysville, Utah, was elected 1951 president of the NCA, succeeding Henry P. Taylor of Walkerton, Va. Fred C. Heinz, special assistant to the president, H. J. Heinz Co., Pittsburgh, was named vice president, with Carlos Campbell, Washington, D. C., continued as association secretary. Eugene A. Hildreth, manager, market development dept., Owens-Illinois Glass Co., Toledo, was re-elected president of the Canning Machinery & Supplies Assn., while Hal W. Johnston, vice president, Stecher-Traug Lithographing Corp., Rochester, N. Y., was again made vice president of the group. New directors named by the machinery and supplies association were Frank S. Langsenkamp, Jr., vice president of F. H. Langsenkamp Co., Indianapolis, and C. K. Wilson, vice president and general manager of the Sprague Sells Div., Food Machinery & Chemical Corp., Hoopeston, Ill.

The busy conventional schedule included two days of program sessions dealing with the role of canned foods in civil defense and military procurement and two days of technological sessions on canning technology, raw products research and fishery problems. To expedite contacts with industry representatives, the Quartermaster Corps, Department of Agriculture, National Production Authority and several other government agencies had special temporary offices at the convention headquarters.

Among the addresses of special interest from the packaging standpoint were: "Metal Can Conservation," Robert J. Small, chief, Metal Can Unit, Container Div., National Production Authority, and another talk by Charles A. Lewis, acting director, Containers and Packaging Div., National Production Authority; "Radiations and Their

Applications in Food Processing," Bernard S. Proctor, Dept. of Food Technology, Massachusetts Institute of Technology; "The Armed Forces Look to America's Canning Industry," Maj. Gen. Herman Feldman, Quartermaster General, U. S. Army; "The Role of Special Analytical Tools in Special Investigational Work and in Trouble-Shooting," O. R. Alexander, Research Div., American Can Co., Maywood, Ill.; "Canned Foods in Civil Defense," Dr. E. J. Cameron, director, Washington Research Laboratory, NCA; "Dietetic Packs in the Nutritional Program," J. Russell Esty, director, NCA Western Branch Laboratory, San Francisco.

In his talk, Dr. Cameron declared that foods sealed in tin and glass offer the public its best protection against contamination resulting from atomic, biological or chemical warfare. Dr. Esty called attention to current confusion and abuse concerning the use of the word "dietetic" on food labels. "The U. S. Food and Drug Administration," he said, "is greatly interested and intends to see to it that dietetic foods are properly labeled." He urged that canners give this problem serious attention in order to profit fully from what appears to be an excellent opportunity for expansion.

Drugs in Near East

Particularly due to superior packaging, drugs of American manufacture have the highest acceptance in history today throughout the Near and Middle East, according to Louis A. Gaillard, Division Manager, Near and Middle East, for the Schering Corp.

However, competition is growing from English, Belgian and German firms, Mr. Gaillard recently told the trade press while on business in New York, and warned American drug manufacturers to maintain their high standards of packaging as one means of retaining these foreign markets.

He mentioned four ways that will help American drug manufacturers to retain the high acceptance for American products:

- (1) Do more packaging in smaller units to meet foreign buying habits.
- (2) Meet foreign competition on price without sacrificing quality.
- (3) Engage in more barter deals to solve the exchange problem.
- (4) Continue extensive research to be first with new products.



... with sparkling Fisher's Aluminium Foil see over

Let the
Scintillating Beauty
of Fisher's Aluminium Foil
SELL your product

Whatever the size or shape of your packaged product, it will look fresher, gayer, *more attractive* if dressed in the brilliant colours of Fisher's Aluminium Foil. When sales are "patchy," when seasonal demand slackens, whenever you feel new stimulating action is needed to sell, then is the time to transform the

appearance of your product with Fisher's Aluminium Foil — the wrapping that blends colour and sparkle in a way no other can. Send today for samples and prices — there is a printed or embossed foil for every packaging need in a thousand glistening new designs, of which this inset is but one.

FISHER'S FOILS

FISHER'S FOILS LTD · WEMBLEY · MIDDLESEX · ENGLAND
TELEPHONE: WEMBLEY 9811 CABLES: LIOPNIT, WEMBLEY (ABC CODE 6TH EDITION)

**ELIMINATE
all STATIC!**



OXY NEUTRALIZER
Cold BAR

**NO ARC
NO SPARK
NO SHOCK**



SAFE & DEPENDABLE — Herbert's System of complete static elimination guarantees years of service at a running cost of only a few cents a day. For application on all types of machines.

HERBERT

PRODUCTS Inc.

WRITE FOR ILLUSTRATED FOLDER

74-32 JAMAICA AVE.
WOODHAVEN 21, N. Y.

PRINT

*as you glue...
as you seal*

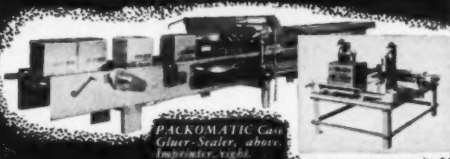
corrugated shipping cases

WITH

PACKOMATIC

AUTOMATIC CASE IMPRINTER

Fibre shipping cases automatically packed, glued, sealed, counted, coded and imprinted with up to 8 lines on any or all panels—this can be yours to help reduce operating costs, increase earnings, lower prices to the consumer. Get facts about completely automatic packaging by PACKOMATIC.



PACKOMATIC Case
Gluer-Sealer, above.
Imprinter, right.

PACKOMATIC

J. L. Ferguson Company, Rt. 52 at Republic Ave., Joliet, Illinois

MARCH 1951



Famous Beer Labels Now Being Printed from SGS Cylinders!

Identifying America's finer beers requires finer labels. To produce these better labels, gravure printers of the famous labels shown above now have their gravure cylinders prepared by SGS.

**Completed SGS Cylinders Delivered
3 Weeks After Order and Art Received!**

In addition to finer, more accurately etched gravure cylinders, SGS completes its work in record time. Average delivery runs about 3 weeks from date of order . . . for every size cylinder . . . every process . . . even including chrome plating.

One-Stop SGS Service Assures Better Results!

Gravure printers furnish finished art and layout. SGS does the rest . . . all in one shop . . . returning cylinders for black and white or color . . . ready to run on any printable stock specified. For accuracy . . . for lower cost, long runs . . . for faster delivery . . . or for a repair job . . . try SGS! Details gladly submitted.

(SGS are NOT printers and have no financial interest in any printing firm.)



SOUTHERN GRAVURE SERVICE

Complete Gravure Cylinder Service

301 WEST MAIN STREET • LOUISVILLE 2, KY.

References

1. English, Harry
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1999-01-14

The development of a new packaging device for use in the prepackaging of apples has been announced by the U. S. Dept. of Agriculture. With the device, which was illustrated and described in an article in *Modern Packaging* in December, 1949 (p. 81), apples can be packaged at the shipping point directly and at less cost than the hand-packing methods. The device, developed by the Washington State Agricultural Experiment Station, is described with illustrations in the report, "Development of a New Packaging Device for Prepackaging Apples," by the U. S. Dept. of Agriculture, Agricultural Research Service, Washington, D. C.

HAZEL-ATLAS GLASS CO.

Wheeling, West Virginia

from the Agricultural Department's Press Service, Washington. The copies of which may be obtained from the Department (APHIS) are of "Packaging Apples at Point of Production," USDA's report titled "The role of filling bags with this device as one method of reducing insect damage to apples in different types and comparative costs." One bagged

A BIG FABRICATOR

BIG JOB

gaidot tañ ni "42 ot "E mori gaidi

ethylene or barrier materials

ARMED AND DANGEROUS

Large
Tubes
(bent)

These packages can be made in any size, shape or quantity. They are made to order and are available in a wide range of materials and finishes. For more information, contact your nearest distributor or write to: **W. J. B. & Co. Ltd., 100, The Quadrant, London, W.1.**

Samples and Prices Available

FLEXIBLE

Chicago 16, Illinois

SEALERS

in heavy weight
sift-proof seals
page 100

When the sale is made—away from

ing—the goodwill—

opped with a will-building can center

Can I be a

your sales messages

Message, Slogan

...every glass contains...

...is given exactly as your

Advertising - Exceptional Point of

such as food, chemicals, product.

A BIG FABRICATOR

is ready for

A BIG JOB

anything from 3" to 54" in flat tubing

Polyethylene or Barrier Materials

for

MILITARY PACKAGING REQUIREMENTS

Bags Tubes Pouches Sheets
(plain or printed)

We welcome your inquiries for packages to meet moisture-vapor-proof, greaseproof and waterproof requirements of MIL-JAN-AN specifications. These packages can be made in any size, shape or length, and from 3" to 54" wide

Samples and Prices Available upon Inquiry

FLEXIBLE PACKAGE CO.

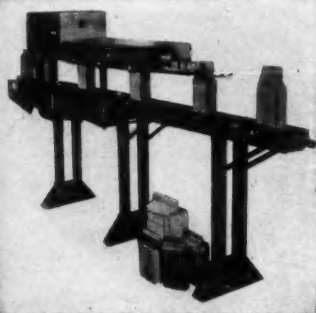
2636 S. Shields St.

Dept. MPM

Chicago 16, Illinois

FRY BAG SEALER

*makes
sift-proof seals
in heavy weight
paper bags*



Why struggle along with antiquated methods when the Fry Model CSG automatically makes a double-folded *sift-proof* heat seal in the top of any heavy weight paper bag. The first fold is securely heat sealed; the second is glued for extra safety. Perfect for granular or fine products such as foods, chemicals,

insecticides and the like.

Bags handled include polyethylene and pliofilm lined, and those with thermoplastic top sealing bands. Simple adjustments for bags of various heights.

When writing, please submit a sample of your bag and your product.

George H. FRY Company

167 Front Street, New York 7, N.Y.

forated films were superior in condition and appearance to those in standard glassine-paper-lined lugs.

References

1. English, Harley, and Gerhardt, Fisk. Effect of Carbon Dioxide and Temperature on the Decay of Sweet Cherries under Simulated Transit Conditions. *Amer. Soc. Hort. Sci. Proc.* 40: 172-176. 1942.
2. Gerhardt, Fisk, Wright, T. R. Films for Cherries. *MODERN PACKAGING* 21: 163-165, 214, 216, 218. June, 1948.
3. Gerhardt, Fisk. Fruit Film Results. *MODERN PACKAGING* 23: 125-127, 170. Jan., 1950.
4. Smock, R. M. Influence of Controlled Atmosphere Storage on Respiration of McIntosh Apples. *Bot. Gaz.* 104: 178-184. 1942.

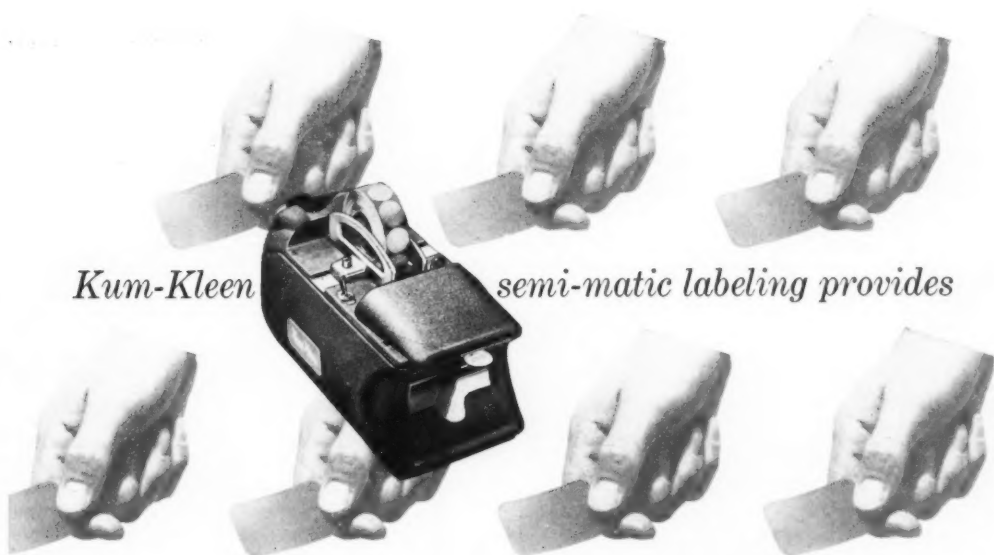
New apple bagger

The development of a new bagging device for use in the pre-packaging of apples has been announced by the U. S. Dept. of Agriculture. With the device, which was illustrated and described in an article in *MODERN PACKAGING* in December, 1949 (p. 81), apples can be pre-packaged at the shipping point more quickly and at less cost than by present hand-packaging methods.

The device, developed by the Washington State Apple Advertising Commission under contract with the USDA, consists primarily of a chute into which the apples flow automatically. The operator slips a transparent plastic bag over the chute and apples, then tilts the chute and the apples slide rather than drop into the bag.

When apples are packed semi-automatically into 4-lb. plain transparent bags from a battery of these chutes attached to a special bagging table, indications are that the total cost of marketing apples from producer to consumer in pre-packaged form can be reduced by about 9 cents per 42-lb. box below the cost of marketing apples in the conventional standard box.

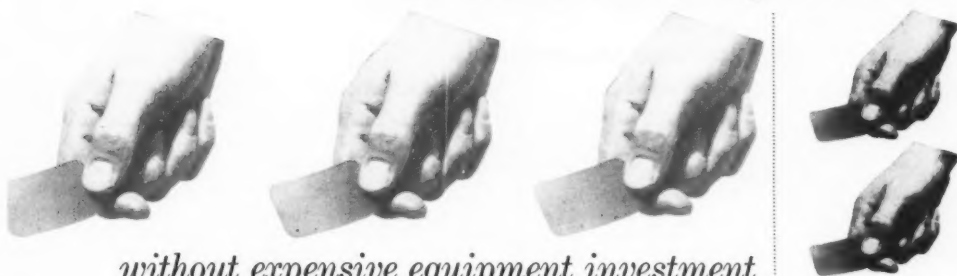
Comparative costs of pre-packaging apples in different types and sizes of bags and by different methods of filling bags with this device are shown in USDA's report titled "Pre-Packaging Apples at Point of Production" (AIB29), copies of which may be obtained from the Agriculture Department's Press Service, Washington, 25, D.C.



Kum-Kleen

semi-matic labeling provides

10 hands for the price of 2



without expensive equipment investment

KUM-KLEEN SEMI-MATIC LABELING increases the speed and efficiency of each employee as much as 500%...free of expensive equipment costs. Kum-Kleen "pressure-sensitive" labels on "conveyor-belt" rolls, feed through the Avery electric dispenser as fast as they can be applied by the operator. Waste motion of handling and sorting loose labels is completely eliminated. The dispenser is small, compact, and fits into any production line. Simple in design, efficient in operation, it can be operated by unskilled help.

Avery Pressure-Sensitive Kum-Kleen labels can be applied to any smooth surface without moistening. They stick-and-stay-stuck, do not pop, peel or curl, even under extremes of heat and humidity. Kum-Kleen labels also eliminate inefficient, sticky fingers, messy labels and soiled packages.

If you're having problems with such hard-to-label surfaces as cellophane, ploi film, polyethylene, glass, metal, plastics, varnished wood, etc., send for information and samples of Kum-Kleen labels. They can be produced to your specifications...to dramatize *your* package.



AVERY ADHESIVE
LABEL CORPORATION

NEW YORK CITY: 41 Park Row
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CLEVELAND: 2123 East 9th Street
PHILADELPHIA: 1069 Commercial Trust Building
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MOLDED CLOSURES by *Terkelsen*

STOCK

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Stock sizes 10 m/m
to 58 m/m phenolics
or striking urea colors



We specialize
in private mold
designs

Jesselson Sales Co., Inc.
347 Fifth Ave., New York 15

J. Rabinowitz & Sons, Inc.
2 Hanson Place, Brooklyn 17

"Tinless" tin can

A major step forward in freeing this country from dependence on foreign sources of can-making materials was demonstrated recently by the American Can Co. when it revealed its process for producing a virtually "tinless" tin can.

Representatives of some 90 can manufacturing firms from all parts of the country, American Can officials announced at its headquarters at its plant in Maywood, Ill., of the techniques the company has developed for making an enameled steel container. The only tin used was 3% in the thin strip of solder which seals the side seam of the can.

The company's process makes possible a saving of more than 92% of the tin normally used in the manufacture of several large-volume sizes of cans, according to Dr. R. W. Pichler, manager of American Can's general research laboratories at Maywood.

The demonstration was part of the company's announced policy of making available to the industry the proven results of its continuing research program called "Operation Survival." Planning began in 1946 and the program has been under way actively for the past year. It is aimed at developing containers made entirely from materials available on this continent.

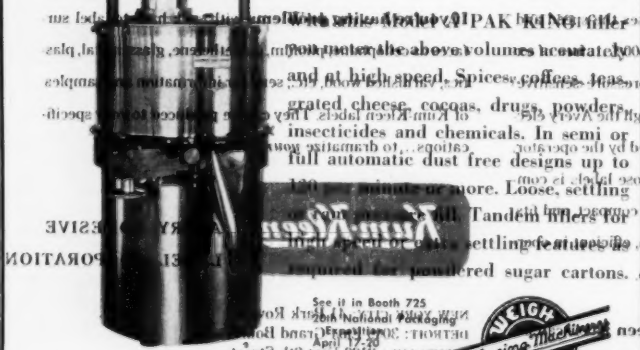
The research has been conducted by American Can in conjunction with more than 20 other leading American companies who are potential suppliers of the materials and proven findings will be turned over to other can manufacturers as a public service.

The industry group on the plant tour inspected a can-making line which had been converted for the production of the steel cans. The tour included a step-by-step trip along high-speed automatic machines which turned out cans at some 330 a minute. The demonstration cans were of the size normally used for pet foods. This type of container, however, is said to be adaptable to the packing of a variety of dry products, such as ground coffee, and some liquid products, including motor oil and anti-freeze.

The group on the inspection tour learned the mechanical and technical aspects of making steel cans with low tin solder, the problems which had to be overcome and the history of the exhaustive research.

Controlled

PACKAGE FILL MILLIGRAMS
GRAMS OUNCES



See it in Booth 725



Ask for Catalog
No. 48 or Bulletin
No. 481 and 482

WEIGH RIGHT AUTOMATIC SCALE COMPANY
JOLIET - ILLINOIS - U. S. A.

FOR MORE ECONOMICAL
HEAT SEALING

is most efficient. The complete
HEAT SEAL-IT line includes everything
from a hand sealing iron to a fully
automatic bag sealer, including
bug making machines and
exclusive special-purpose
models. All equipment is
fully guaranteed and
backed by nearly 20
years of heat sealing
experience.

HEAT SEAL-IT **WRITE FOR CATALOG**
DIVISION: GLOBE PRODUCTS - HEAT SEAL CORP.
PHILADELPHIA LOS ANGELES

3872 Robinson Blvd., Los Angeles 34.

Labels Boxes Displays
Since 1883
The quality and character
of Howell Made Packages
are identified nationally

HOWELL
ELMIRA
The quality and character
of Howell Made Packages
are identified nationally

F. M. HOWELL & CO.
79-95 Pennsylvania Ave., Elmira, N. Y.

NOW!

REET*

EXTRA!

17 GAUGE

CALENDERED VINYL FILM

A new companion to REET*
to all packaging problems from all corners of the
country tell how REET* and REET* films.
and a plastic package are right for each other.

Enjoy the advantages of a cal-
endered product and still re-

tain the economy of a thin film.
interest to everyone who uses plastics products in any form. Long
a prime source for authoritative comment on current plastics de-
velopments. Moreover, we give you long term technical and re-
lating phases of the industry.

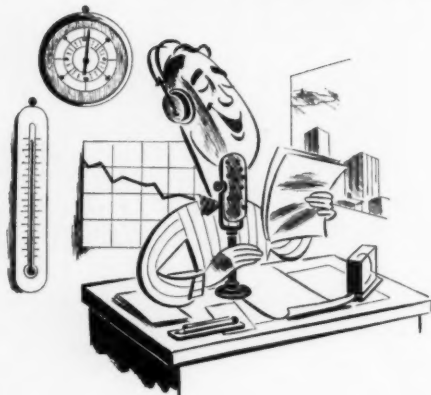
ROSS & ROBERTS, Inc.
West Haven, Conn.
ROSS & ROBERTS SALES CO., INC.
350 Fifth Avenue, New York 1 • BRYant 9-7961
*Trade Mark

MODERN TECHNOLOGY

171

Weather Forecast:

PLASTIC PACKAGING FOLLOWED BY INCREASING SALES



While it's true that plastic packages do not provide a universal answer to all packaging problems, reports from all corners of the country tell how pleased retailers and customers are when a product and a plastic package are right for each other.

... but there's more to it than telling your purchasing agent: *Buy us some plastic packages.* You owe it to your product to "bone up" on the changing plastics scene.

Each month MODERN PLASTICS brings you the latest items of interest to everyone who uses plastics products in any form. Long a prime source for authoritative comment on *current* plastics developments, MODERN PLASTICS also give you *long term dividends* in the form of enlightening articles, surveys and reports on important phases of the industry.

The cost? Only \$5 per year (12 issues), anywhere in the world. Don't miss another issue. Just write. We'll enter your subscription and bill you later.

MODERN PLASTICS

A Breskin Publication

575 Madison Avenue New York 22, N. Y.

POPAI Symposium

How manufacturers of brand-name products are adapting point-of-sale material to meet the current emergency situation, said John M. Palmer, chairman of the board of the Point of Purchase Advertising Institute, will be demonstrated at POPAI's two-day exhibit and the Fifth Annual Symposium, scheduled to be held on April 3 and 4 at the Waldorf Astoria Hotel, New York.

The exhibit will feature the newest window displays and store displays of every type, including lithographed paperboard, wood, metal, glass, plastics and tape, of 53 of the nation's top-flight designers and manufacturers of displays. An estimated attendance of 10,000, including sales, advertising and administrative executives, is expected to attend. At the Symposium luncheon on April 4, leading users of point-of-sale material will discuss the subject of merchandising through the effective use of this medium.

Pointing out that "brand franchises represent many years of creative effort and vast sums of money so that national advertisers can ill afford to abandon their pre-emptive positions in retail fields," Mr. Palmer emphasized the necessity for constant daily reminders to keep the brand names of the advertisers' products continuously before the consumers.

Reminder value of point-of-purchase advertising," he pointed out, "is indicated by the fact that more than \$500,000,000 were spent on point-of-sale displays in 1950 to stimulate brand-name purchases."

A recent survey of several hundred leading advertisers made by POPAI on the question of what percentage of the total advertising appropriation is spent for point-of-purchase advertising disclosed the following: soft drinks, from 40 to 55%; food specialties, from 26 to 45%; cosmetics, 30 to 50%; liquor, from 20 to 40%; beer, 25 to 30%; drugs, 15 to 25%; food staples, 10 to 20%; meat, 10 to 16%.

"When it is realized that 90% of all candy sales, 60% of all department-store sales and 75% of all variety-store sales are unplanned purchases, the result of point-of-sale presentation," Mr. Palmer added, "it will readily be seen how potent a factor this type of advertising can be in securing and maintaining brand-name recognition for all manufacturers."

MODERN PACKAGING

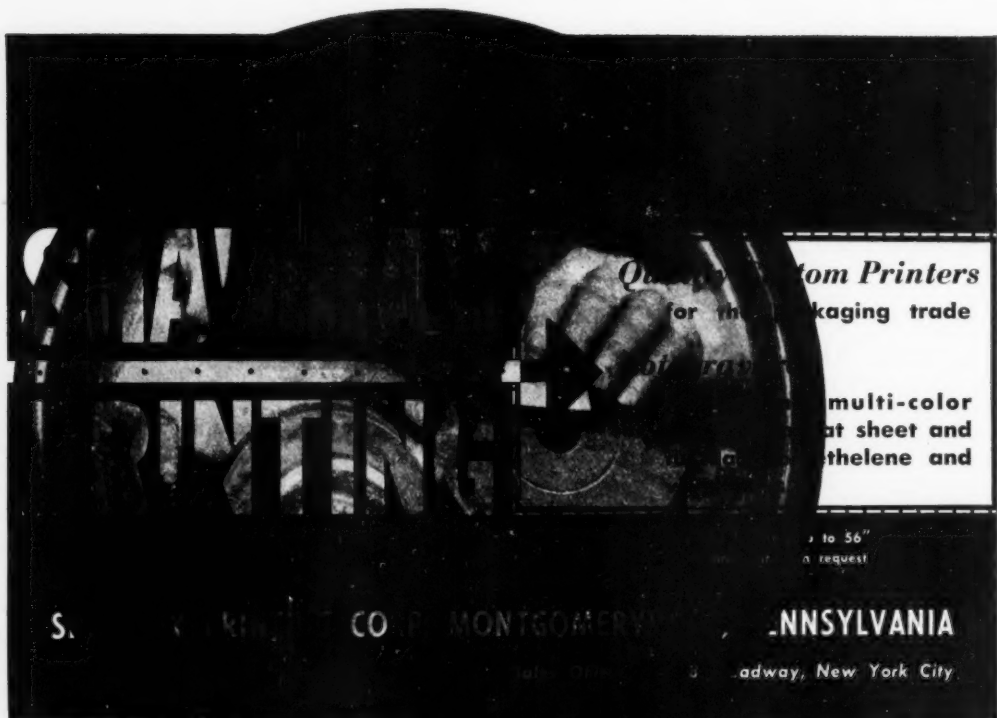


The mark of reliable glass

Users of glass containers know the Circle A—Armstrong's trade-mark—as the mark of reliable glass. Ask your Armstrong representative to show you how these quality containers can step up filling line performance and give better service in the field. Write to Armstrong Cork Company, Glass and Closure Division, 2303 Prince Street, Lancaster, Penna.



ARMSTRONG'S GLASS



Multi-Color Printers
for the packaging trade

multi-color
at sheet and
ethylene and

to 56"
on request

S. ... CO. P. MONTGOMERY ... PENNSYLVANIA

... adway, New York City



Consumers Say:

UNIT SERVICE PACKETS ARE SO HANDY!

Ideal Sales Builders for Powdered Products

Their popularity keeps growing... because Unit Service Packets are the perfect package for any granular or powdered product that can be used in individual services. They insure cleanliness, measured portions, and simplified dispensing... at a tiny cost.

Send now for samples and details

Fully Sealed, Shaker and Sifter Models

UNIT Packet COMPANY

88 GERRISH AVE. CHELSEA, MASSACHUSETTS



AVAILABLE:

VALUABLE SALES TOOLS

Reprints of any article which appears in Modern Packaging are available at extremely low prices.

business organizations regularly receive reprints to customers and prospects... a good full... Other companies expect salesmen with reprints of pertinent Modern Packaging articles in their sales story.

If there is any feature in this or other issues of Modern Packaging which can be of value to you in reprint form, ask for quotations right now.

Address your inquiry to . . .

INDUSTRIAL MAGAZINE SERVICE
AN AFFILIATE OF BRESKIN PUBLICATIONS
575 Madison Ave., New York 22, N. Y.

FASTENERS EASIER PACKAGING



with the **Anderson Portable Bagger**... easy to bag plastic... Simple adjustments for height... able to bag... with air filter... and keeps... foreign matter... get the facts.



ANDERSON BROS. MFG. CO.
ROCKFORD, ILLINOIS

Package Finishing Checklist

- vinyliting
- lacquering
- varnishing
- heat seals
- embossing
- paraffining
- straight cutting
- die cutting
- moisture gumming
- pressure gumming

Leading Package Finishers Since 1859

JOHN W. CRAWFORD CO.

Finishers to the Printing and Lithographic Trades
160 Varick Street, New York 13, N. Y.
ALgonquin 5-4446

Serves You Right!

LUSTEROID
VIALS and TUBES
Pack your Products
with These
Advantages

- Minimum package weight
- Product visibility
- Complete protection
- Printability
- Savings in labeling
- Savings in handling
- Savings in shipping

slip-on, or screw cap closures. Write for details and samples today.



LUSTEROID

Container Company, Inc.
10 West Parker Avenue
Maplewood,
New Jersey

CLASSIFIED ADVERTISEMENTS

Modern Packaging reserves the right to accept, reject or censor classified copy.

EMPLOYMENT • BUSINESS OPPORTUNITIES • EQUIPMENT (used or resale only)

MACHINERY FOR SALE

PACKAGE SEALING MACHINE—Immediate delivery, perfect mechanical condition, very reasonable, for sealing top and bottom Style A cartons, adjustable to any size, belts 6" wide x 13½ ft., speed as fast as operator can handle cartons. Photographs, detail description and price upon request. Frostee Sine Co., Antioch, Illinois.

BELT CONVEYOR: Reversible 30' long, 5 h.p. 1750 enclosed motor. Stitched belt 3½" wide, complete with starter. Radiator Specialty Co., Charlotte, N. C.

FOR QUICK SALE

1 Lynch Wrap-O-Matic. Present wrap size 2½" x 2½"—can be converted. Heat unit specially designed—will seal anything including Pliofilm. Used less than 100 hours. Bargain. Mallet and Co. Inc., 1200 Sheffield Street, Pittsburgh 12, Pa.

AT TREMENDOUS REDUCTIONS

Resina LC Auto, Capper, Stokes & Smith G1, G2 and G4 Auger Powder Fillers. Ameco and Doughboy #46 Bag Sealers. Triangle Model SBA Auto. Net Weigher and Carton Sealer. Triangle Elec-Tri-Pak G2C, G2S and A6CA Fillers. Filler 1, 2, 4 and 8 Head S.S. Fillers. Pony ML and MX Labelites. Cero Auto, Carton Closing Machine. Standard Knapp 492 Carton Sealer. Pneumatic Scale Auto Tite-Wrapper. Hyasen 3-7, Package FA and DF. Scandia Model SUS and SFC Auto. Cellophane Wrappers.

This is Only a Partial List
Tell Us Your Requirements

UNION STANDARD EQUIPMENT CO.
318-322 Lafayette Street
New York 12, N. Y.

FOR SALE ROTOGRAVURE PRESS, 20" 4 Color Champlain. Sheeter, Rewinder, Electric Eye, Reliance, DC & AC, Boiler, Heaters, Practically New. Eastman Tag & Label Co., 548 4th St., San Francisco, Calif.

Here's a bargain in Pudding and Gelatin Powder Packaging Equipment Pneumatic Scale Rotary Combination Carton Former, Liner, Filler and Closer. Packing speed 60 per minute. In good operating condition, but is being replaced by larger volume equipment in Southern California plant. Write or Telegraph Box 163, Modern Packaging.

FOR SALE, 20-valve Mojonier St. Steel Vacuum Filler, 12-spout MRM Stainless Vacuum Filler, 4-spout Stainless Greer Filler, 8-valve King St. Steel Rotary Filler, 8-46 oz. 7-head Jumbo Model E Rotary Crowner. We are specialists in Food-Packing Equipment. Get our complete Stock List. Horne Machinery Co. Inc., 1188 Harrison St., San Francisco 3, Cal.

FOR SALE: 1—Self-adjusting Standard Knapp Gluer-Sealer & Compression unit, minimum carton 3½" long x 2½" wide x 8½" high, maximum 15½" x 11½" x 8½"; 2—Cero Adjustable Carton Gluer Sealers Model A3901-12; 8—Pneumatic Scale Pouch type Tea Bag Machines; 1—Knapp 3B Wraparound Labeler; Pony M, ML, MX Labelites; Standard Knapp adjustable type D Wraparound Labeler, 202 dia. to 10; Burt AU Adjustable Wraparound, World Improved & Model S Spot Labelers; Miller MFS17, MFS Cellophane Wrappers; Stokes & Smith S-S G-1 Powder Filler. Only a partial list. Send us your inquiries. Consolidated Products Co. Inc., 16-20 Park Row, New York 7, N. Y., Phone: Barclay 7-0600.

HELP WANTED

PACKAGING ENGINEER. Old Established St. Louis Company requires immediately a Graduate Engineer, preferably Mechanical, familiar with Corrugated Containers, Folding Cartons, Various Types of Packaging Materials, Waxed Paper Bags, Protective Wrappings, etc., and Packaging Machinery to some extent; also knowledge of writing specifications for these packaging materials. Age 23-35. Salary dependent upon qualifications. Send resume and qualifications. Box 158, Modern Packaging.

MANUFACTURER'S AGENT wanted by large New England manufacturer of paper tubes, metal end paper body canisters, candy specialty packages, toy & novelty items. Box 159, Modern Packaging.

Mill representatives for established bag company offering complete military packaging program to Armed Services, direct accounts and distributors. Territories available for contact man acquainted in New England States, New York area and upstate, Philadelphia area, Northern Ohio, Southwest and California. Write details—lines carried etc. and include recent photo. Address Box 164, Modern Packaging.

Old established leading Mfg. of metal closures (Brooklyn) has opening in sales force. Salary basis. Greater New York area. Sales experience preferred but not essential. All replies held confidential. Box 160, Modern Packaging.

SITUATIONS WANTED

MACHINIST—over ten years' experience with Transwrap Packaging machines, now earning \$125.00 weekly, willing change, at least same salary. Draft exempt. Will accept position outside New York. Best references as reliable, hard worker. Box 162, Modern Packaging.

PRESSMAN with twenty-one years experience on rotary letterpress, rotogravure, and aniline equipment. Desires position as supervisor in the specialty field. Box 161, Modern Packaging.

MISCELLANEOUS

WANTED: Printing Press suitable for gummed tape. Prefer Oil Ink. Please give full details in first letter. Box 157, Modern Packaging.

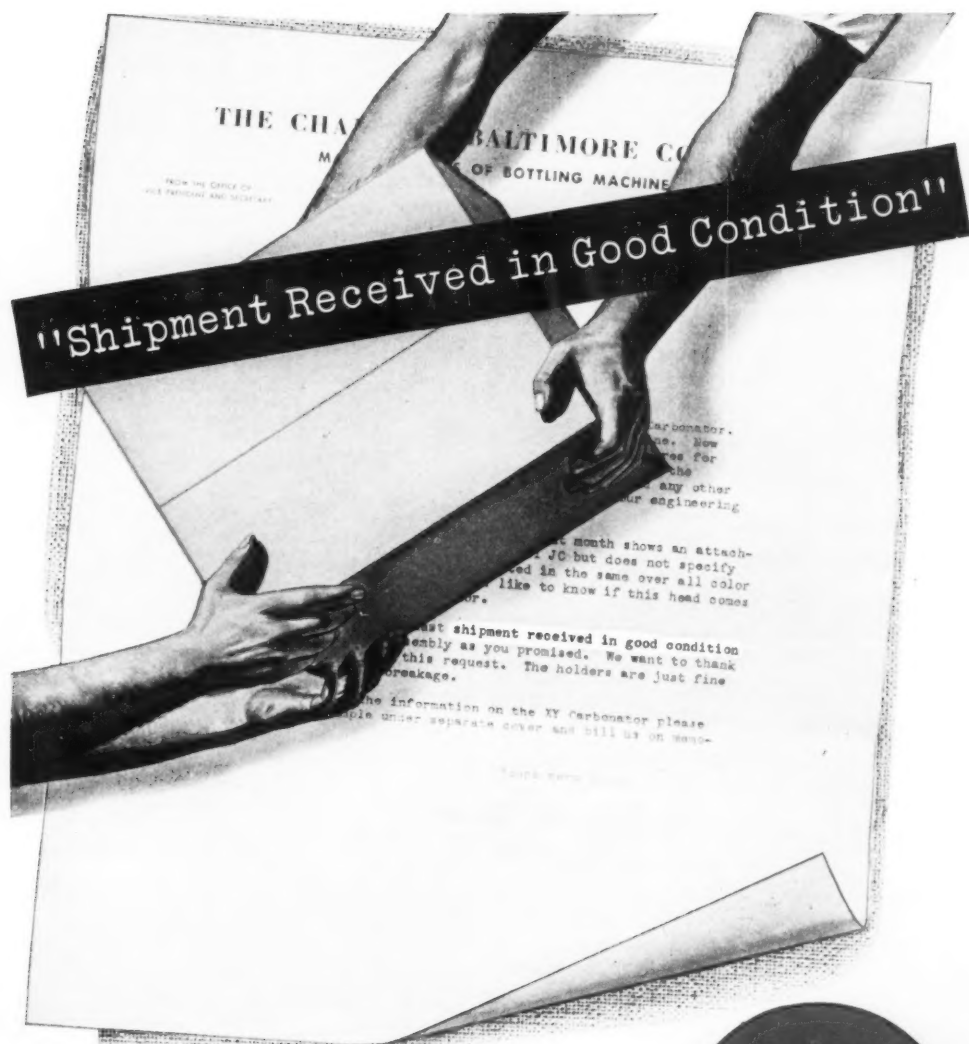
WANTED: Plastic scrap and rejects in any form. Cellulose Acetate, Butyrate, Polystyrene, Vinyl Polyethylene, etc. We pay top prices for clear, colored and printed scrap in any quantity. Box 781, Modern Packaging.

WANTED: 1—Model A and 1—Model B Trans-wrap Machines; 1-S & S G-1 Powder Filler; Feidervin Grocery Bag Machines, ½¢ to 35¢; 1—Gluer & Compression unit to handle 24" L x 14" W x 16" H Cartons. Box 143, Modern Packaging.

All classified advertisements payable in advance of publication

Up to 60 words.....\$7.50	Up to 120 words\$15.00	Up to 180 words.....\$22.50
Up to 60 words (boxed).....\$15.00	Up to 120 words (boxed)....\$30.00	Up to 180 words (boxed).....\$45.00

For further information address Classified Advertising department, Modern Packaging, 122 E. 42nd St., N. Y. 17, N. Y.



That's the pay-off line in this letter — the good relations builder! "Shipment received in good condition." When your product is packaged in Gaylord boxes — you know your product is better protected — All the Way!

For years Gaylord boxes have been protecting the products of many of the country's leading manufacturers.



GAYLORD CONTAINER CORPORATION, General Offices: ST. LOUIS

New York • Chicago • San Francisco • Atlanta • New Orleans • Jersey City • Seattle • Indianapolis • Houston • Los Angeles
Oakland • Minneapolis • Detroit • Columbus • Fort Worth • Tampa • Cincinnati • Dallas • Des Moines • Oklahoma City • Greenville
Portland • San Antonio • Kansas City • St. Louis • Memphis • Bogalusa • Milwaukee • Chattanooga • Weslaco • Appleton
Hickory • Sumter • New Haven • Greensboro • Jackson • Miami • Mobile • Omaha • Philadelphia • Little Rock • Charlotte

"Sheeting of Accuracy of 1/32"

The SEALTITE

SYNCHROMATIC

"from waste paper board to solid kraft... from .002 to .030 thickness"

running 24 hours a day

6 days a week

Produces a **BETTER PACKAGE**
writes the owner of 3 Beck Shelters
from a Standard Paper
with minimum loss
Bag at Big Savings

Write for Complete Information

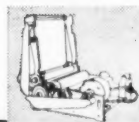
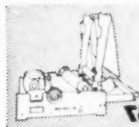
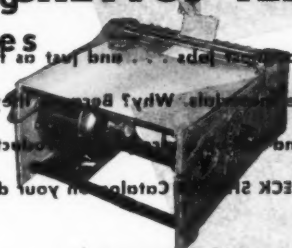
CONSOLIDATED PACKAGING MACHINERY CORP.
BUFFALO 13, N. Y.

Better Coating at Lower Cost with

POTDEVIN

Coating
Machines

Manufacturers in every field have been depending on their "POTDEVINS" to cut down operating costs. Now there is a new series, the 2R, for applying glue or cement to any kind of material.



Ductor-roller... accurate coating. Tank... easy and quick cleaning... with a... remains perfectly clean. Models available in 6, 9, 12 and 15 inch widths.

Write about this today trial.

POTDEVIN MACHINE CO.

1244 38th Street, Brooklyn 18, N.Y.

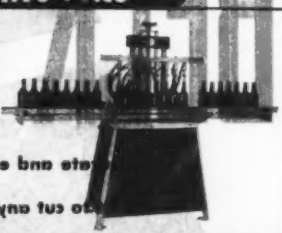
Designers and manufacturers since 1893 of equipment for Bag Making, Printing, Coating, Gluing, etc.



Filling Accuracy at an
Attractive Price

PACKER

VACUUM
LIQUID
FILLING
MACHINE



You'll have a BECK SH... to cut... You'll have a BECK SH... to cut...

Package of liquid products all over the world acclaim the speed and versatility of their Packer Vacuum Liquid Filling Machines.

Models with 6, 8, 10 or 12 spouts... fills liquids — thin, foamy, viscous, hot or cold. BOTTLES from fractional ounces to gallons — CANS up to quart size.

Clean. Accurate. Quick changeover. Liquid contact parts of stainless steel, brass and resistant materials. The Packer Vacuum Filler will be adapted to the exact requirements of your product.

Write for complete information

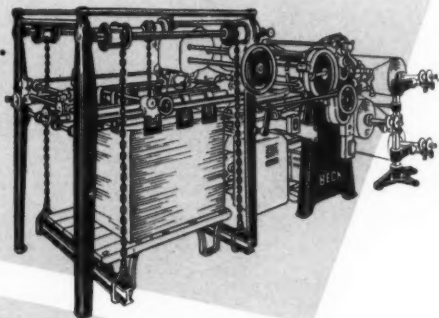
PACKER MACHINERY CORP.

36 Irving Place, New York 17, New York

"Sheeting to ACCURACY of $\frac{1}{32}$ "

SPEED from 300 to 500 ft. per minute"

**"from waste paper board to solid kraft . . .
from .009 to .030 thickness . . .
running 24 hours a day
6 days a week"**



writes the owner of 3 Beck Sheeters,
who continues:

**"They have held up under the terrific beating we have given them . . .
maintenance cost has been very low. We have had splendid results with
regard to speed and accuracy."**

BECK

AUTOMATIC ROLL SHEET CUTTERS

are rugged as your toughest jobs . . . and just as fast,
accurate and economical on your fine materials. Why? Because they're
built to cut *anything* from rolls . . . and roll up a nice pile of production
profits in the process. You'll have a BECK SHEETER Catalog on your desk
for the asking. Do it today!

BECK SHEETERS, SLITTERS



BOOTH 257

CHARLES BECK MACHINE CORPORATION
406 NORTH 13TH STREET PHILADELPHIA 3, PENNA.

America Reaches for Michigan Cartons

Cartons, quite often, actually *invite* you to buy.

Many are so forcefully designed, so fresh and clean in appearance, they 'corral' the prospect.

They say . . . STOP! . . . LOOK! And, in so many cases, *right then* new sales are made.

Michigan Cartons embody all the elements of good packaging . . . excellent design, sparkling color, cleanness and product protection.



Michigan CARTON CO. • BATTLE CREEK, MICHIGAN



SHELLFLEX

Remember
these names!

they designate

the many

Approved

Shellmar

Materials

DEHYDRAPAC

Durofoil

for

packaging

under

AN-JAN-MIL

Government

Specifications



**HELP IN YOUR
EVERYDAY PACKAGING**

Still available is expert advice on problems of civilian packaging . . . information about alternate materials, redesigning for economies in materials or costs . . . or planning for the future. Ask your nearest Shellmar Package Advisor.

Shellmar Know-How

Through the years of World War II, Shellmar led in the development and supply of moisture-vapor barrier materials. From this experience came a number of combinations of materials . . . all tested in use and now approved for use on military contracts specifying Method I-A, or Method II packaging . . . with or without dessicants.

Shellmar Facilities

To meet the increased demand of military needs, Shellmar has expanded its production facilities with modern laminating and fabricating equipment in two new plants devoted exclusively to production of Shellflex, Dehydrapac and Durofoil.

Shellmar Services

Experience and facilities combine to make Shellmar your logical source for government approved packaging materials. Call or write today for samples and information. Trained Shellmar representatives are located near you . . . ready to give you immediate help in military packaging.

Sales Offices: Atlanta, Baltimore, Boston, Chicago, Cincinnati, Dallas, Denver, Detroit, Kansas City, Little Rock, Los Angeles, Minneapolis, New York, Philadelphia, Pittsburgh, Portland, Ore., Rochester, Salt Lake City, San Antonio, San Francisco, Seattle.



Shellmar
PRODUCTS CORPORATION

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Plants, Mt. Vernon and Zanesville, O. • South Gate, Calif.
Mexico City • Medellin, Colombia • Sao Paulo, Brazil